

**Response to Comments
For
Adoption of
Regional Road Maintenance ESA Program
Guidelines**



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Appendices

[Appendix A: Tri-County Salmon Conservation Coalition Executive Committee List](#)

[Appendix B: Tri-County Salmon Conservation General Assembly Mailing List](#)

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[Appendix D: Written Comments \(Copies of Letters\)](#)

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Response to Comments

I. Description and reasons for differences between the proposed and adopted Regional Road Maintenance (RRMP) Endangered Species Act Program Guidelines.

The comments received from the public notices have resulted in minor wording changes to some of the sections of the RRMP and citation corrections in the Biological Review (BR). The differences from the proposed RRMP are shown by section. These specific changes are explained and described in the responses to comments under part [IV](#) of this document.

Regional Road Maintenance Endangered Species Act Program Guidelines

INTRODUCTION

Permit Regulation, page viii.

The following changes to the second paragraph were made to clarify and improve the accuracy of the language and were based on comments [1.11](#) from Karen Walter of the Muckleshoot Tribe, and [2.3c](#) from Parry Harvester of WDFW.

To clarify the fish passage criteria defined by WAC 220-110-070, WDFW prepared a design manual entitled "Fish Passage Design at Road Culverts" (the Manual) (WDFW 1999). The Manual was reviewed by the National Marine Fisheries Service, which ~~found~~ **concluded** that, ~~the standards stated in this publication would enable the attainment and maintenance of PFC for fish passage when~~ **designing used for new or retrofits or replacements of existing culverts, the WDFW guidelines should result in improved habitat conditions with the potential to bring impaired habitat on a trend to Properly Functioning Conditions (PFC), and that using the WDFW manual while designing a new culvert should not impair PFC as long as the hydraulic and other fish passage considerations are properly applied** (NOAA Fisheries memorandum, Assistant Regional Administrator for Hydro Division to Assistant Regional Administrator for Habitat Conservation Division, November 28, 2001). Therefore, the Regional Program incorporates the relevant considerations for the design of new and retrofit culverts stated in the Manual, as well as other fish passage and habitat considerations addressed in the last chapter of the Manual. (As of the date of this publication, the Manual can be viewed on the Internet at <http://www.wa.gov/wdfw/had/engineer/cm/fpdrc.pdf>).

Road Maintenance is Mitigation, page xi.

The following change to the second paragraph conservation outcomes list was made to clarify and improve the accuracy of the language and was based on comment [2.90](#) from Karen Walter of the Muckleshoot Tribe.

1. Street sweeping reduces sediments from entering storm drains and waterways.

2. Maintaining and cleaning enclosed drainage systems removes sediments.
3. Maintaining and cleaning oil/water separators reduces pollutants and sediments.
4. Maintaining and cleaning retention/detention facilities and connector ditches removes pollutants and sediments.
5. Repair and restoration of an enclosed drainage system facility ensures storage capacity.
6. Mowing bio-swales and cleaning water quality vaults removes pollutants and sediments.
7. Culvert repair and rehabilitation reduces erosion.
8. Outfall maintenance reduces erosion.
9. **Check dams or similar BMPs shall not be used when maintenance activities are conducted in locations that could reduce actual or potential high flow salmonid refuge functions.**

PART 1 – Regional Program

Program Element 5: Scientific Research

Page 1.21

The following changes to the first paragraph were made to clarify and improve the accuracy of the language and were based on comments [2.17](#) from Karen Walter of the Muckleshoot Tribe, and [2.18b](#) from Perry Harvester of WDFW.

~~Although many erosion/sediment control studies have been conducted on large-scale construction sites, members of the Regional Forum found little research on BMPs for routine road maintenance. BMP implementation will normally contribute to habitat improvement. Without hard scientific data, however, it is impossible to estimate the effectiveness of all BMPs on habitat and species recovery. Recognizing this dilemma, The Regional Forum has committed to including two types of scientific research program elements. The research will serve to verify the effectiveness of the BMPs, and update the BMPs based on the latest technologies.~~

Program Element 8: Biological Data Collection

Page 1.31

The following changes were made to clarify and improve the accuracy of the language and were based on comments [2.24](#) and [2.25](#) from Karen Walter of the Muckleshoot Tribe.

~~While routine road maintenance activities without BMPs may have a slight cumulative impact on aquatic habitat, the extent and magnitude of that impact is completely unknown. Existing ROW structures are linear and tend to have small-scale and minor site-specific points of impact. For that reason, the following biological data will be gathered in the ROW:~~

- Identification of ~~sensitive~~ aquatic habitat resources within ROW.
- ROW habitat location to make BMP decisions.
- Train and alert staff where to apply the guidelines.

Program Element 10: BMPS and Conservation Outcomes

The following changes were made to clarify and improve the accuracy of the language and were based on comments [1.1](#) from Martin P. Hayes, Citizen; [2.7b](#) and [2.56](#) from Perry Harvester of WDFW.

To improve clarity a reference back to the definition of "road maintenance" will be made in each maintenance category in Program Element 10.

Foot note 1: Maintenance activities are not development or redevelopment activities but are mitigation over the life of the structure and are as defined on page X of the Introduction section of the RRMP Guidelines.

Page x of the Regional Road Maintenance Guidelines defines "road maintenance" as:

Maintenance: Repair and maintenance include activities that:

- (a) are conducted on currently serviceable structures, facilities and equipment; and
- (b) involve no expansion of or change in use of such structures, facilities, and equipment beyond those that existed previously; and
- (c) do not result in significant negative hydrological impact.

Repair and maintenance include those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and system or to replace dysfunctional facilities. Repair and maintenance also include replacing existing structures with different types of structures, PROVIDED THAT replacement is required to meet current engineering standards or by one or more environmental permits and the functioning characteristics of the original structure are not changed. An example would be replacing a collapsed, fish-blocking round or wooden culvert with a new box culvert under the same span or width of roadway.

Maintenance Category #5: Watercourses and Streams

Page 1.63

The following change was made to clarify and improve the accuracy of the language and was based on comments [2.3b](#), [3.49](#) and [3.71](#) from Perry Harvester of WDFW.

WAC 220-110-020(41~~83~~): "Watercourse" and "river or stream"...

Page 1.64

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.50](#) from Karen Walter of the Muckleshoot Tribe.

- Ditches or stormwater facilities that are watercourses or streams are maintained when sediment, debris, or vegetation impede flows, or storage of water and sediments to a point where safety **or the ROW structure** is compromised.

Page 164 and 165

The following bullet is being added to BMP Outcomes based on comments [2.58](#), [2.91](#), [2.106](#), [2.107](#), [3.31](#) and [3.40](#) from Karen Walter of the Muckleshoot Tribe; [3.41](#) and [3.62](#) from Perry Harvester of WDFW; and [3.79](#) from Robert Kelly of the Nooksack Tribe.

BMP Outcomes

- Maintain and restore water quality by cleaning ditches and/or stormwater facilities that are watercourses or streams.
- Maintain or restore structure.
- Minimize sediment or debris from leaving construction/repair area.
- Maintain or restore surface water drainage and storage.
- Maintain or restore sediment storage capacity.
- Reduce flooding from plugging of system or reduced storage area.
- Keep structure clear of debris, trash, and yard waste.
- Reduce sediments and debris from entering watercourses or streams.
- Reduce sediment conveyance through drainage system by trapping and removal.
- Leave vegetated sections in ditch where sediment buildup has not impeded flow to the point of causing flood damage/hazard or overtopping a road.
- Improve in-stream biofiltration.
- **Large Woody Material (LWM) may be relocated within the ROW to help maintain stream forming processes and to support fish habitat as permits, public safety and ROW structure conditions allow.**

Page 1.65, BMPs Table

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.51](#) from Karen Walter of the Muckleshoot Tribe.

Permits	Maintenance activities within waters of the State will be reviewed by WDFW, and permitted with an HPA, as necessary.
	When required, habitat restoration will be designed and constructed in accordance with applicable permits.
Fish Exclusion	Fish will be excluded from the construction area using appropriate methods such as the use of nets, dewatering at a controlled rate, and removal of stranded fish according to HPA permit conditions. as negotiated with the services.

Page 1.66, BMPs Table

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.53](#) from Perry Harvester of WDFW.

Disturbed Areas	After Prior to BMPs are removed , clean up accumulated sediments and seed or replant disturbed area.
Equipment/tools	At end of shift, park equipment in designated areas.

Add the following three boxes	Clean equipment and tools offsite in an area where pollutants can be contained.
	If unable to move equipment and tools offsite, control and remove cleaning by-products.

Maintenance Category # 6: Stream Crossings

Page 1.68

The following bullet is being added to BMP Outcomes based on comments [2.58](#), [2.91](#), [2.106](#), [2.107](#), [3.31](#), and [3.40](#) from Karen Walter of the Muckleshoot Tribe; [3.41](#), and [3.62](#) from Perry Harvester of WDFW; and [3.79](#) from Robert Kelly of the Nooksack Tribe.

BMP Outcomes

- Maintain, repair or replace structure.
- Improve or maintain fish passage (HPA).
- Improve or maintain riparian habitat (HPA).
- Improve or maintain streambed habitat within pipe, culvert or area within work zone (HPA).
- Minimize construction/repair worksite area sediments and debris from entering watercourses, streams or water bodies.
- Maintain or restore surface water drainage by performing repairs.
- Reduce streambed/stream bank erosion by revegetation or stabilization of disturbed soils.
- Reduce flooding and erosion from blockages of system by removing obstructions such as debris, trash, yard waste, sediment.
- **Large Woody Material (LWM) may be relocated within ROW to help maintain stream forming processes and to support fish habitat as permits, public safety and ROW structure conditions allow.**

Page 1.69

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.51](#) from Karen Walter of the Muckleshoot Tribe.

Waters of the State Permits	Maintenance activities within waters of the State will be reviewed by WDFW, and permitted with an HPA, as necessary.
	When required habitat restoration will be designed and constructed in accordance with applicable permits.
Fish Exclusion	Fish will be excluded from the construction area using appropriate methods such as the use of nets, dewatering at a controlled rate, and removal of stranded fish according to HPA permit conditions. as negotiated with the Services.
Disturbed Areas	Habitat restoration to be designed and constructed in accordance with applicable design and permits.

Page 1.70

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.62](#) from Karen Walter from Muckleshoot Tribe.

Habitat Goals:

- Repair, replace or maintain structure.
- Protect habitat and watercourse or stream by performing maintenance
- **Protect habitat and watercourse or stream while performing maintenance.**
- Reduce work site pollutant runoff.
- Restore or maintain fish passage through structure.

Page 1.71

The following changes to the first paragraph were made to clarify and improve the accuracy of the language and were based on comments [1.11](#) from Karen Walter of the Muckleshoot Tribe; and [2.3c](#) from Perry Harvester of WDFW.

To clarify the fish passage criteria defined by WAC 220-110-070, WDFW prepared a design manual entitled "Fish Passage Design at Road Culverts" (the Manual) (WDFW 1999). The Manual was reviewed by the National Marine Fisheries Service, which ~~found~~ **concluded** that, ~~the standards stated in this publication would enable the attainment and maintenance of PFC for fish passage when designing used for new or retrofit or replacements of existing culverts,~~ **the WDFW guidelines should result in improved habitat conditions with the potential to bring impaired habitat on a trend to Properly Functioning Conditions (PFC), and that using the WDFW manual while designing a new culvert should not impair PFC as long as the hydraulic and other fish passage considerations are properly applied** (NOAA Fisheries memorandum, Assistant Regional Administrator for Hydro Division to Assistant Regional Administrator for Habitat Conservation Division, November 28, 2001). Therefore, the Regional Program incorporates the relevant considerations for the design of new and retrofit culverts stated in the Manual, as well as other fish passage and habitat considerations addressed in the last chapter of the Manual. (As of the date of this publication, the Manual can be viewed on the Internet at <http://www.wa.gov/wdfw/had/engineer/cm/fpdrc.pdf>.)

Maintenance Category # 9: Bridge Maintenance

Page 1.80

The following bullet is being added to BMP Outcomes based on comments [2.58](#), [2.91](#), [2.106](#), [2.107](#), [3.31](#), and [3.40](#) from Karen Walter of the Muckleshoot Tribe; [3.41](#), and [3.62](#) from Perry Harvester of WDFW; and [3.79](#) from Robert Kelly of the Nooksack Tribe.

BMP Outcomes

- Improve or maintain fish passage (HPA).
- Improve or maintain riparian habitat (HPA).

- Improve or maintain streambed habitat (HPA).
- Reduce sediment at construction or repair area.
- Reduce streambed or streambank erosion.
- Reduce flooding by removal of blockages.
- Prevent failure of structure.
- Prevent debris from entering waterway.
- **Large Woody Material (LWM) will be relocated within the ROW to help maintain stream forming processes and to support fish habitat as permit, public safety and ROW structure conditions allow.**

Page 1.81

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.51](#) from Karen Walter of the Muckleshoot Tribe.

Permits	Bridge maintenance requiring an HPA will be reviewed with WSDFW and permitted prior to construction in accordance with the HPA as negotiated with the Services.
Habitat Measures	Maintain or add areas of spawning, migration, feeding, or rearing habitat as directed by WSDFW(HPA) permits, public safety, and ROW structure conditions allow.

Page 1.83

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.69](#) from Karen Walter of the Muckleshoot Tribe.

Conservation Objectives	Conservation Objectives Achieved By
	<p>Reducing environmental damage from vehicle accidents that, in turn, reduce risk of pollutants such as petroleum hydrocarbons, heavy metals, road wash-off, and debris from entering aquatic habitat.</p> <ul style="list-style-type: none"> • Structural damage to watercourses and stream systems is reduced by not having vehicles leave the road surface.

Maintenance Category #11: Emergency Slide/Washout Repair

Page 1.88

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.51](#) from Karen Walter of the Muckleshoot Tribe.

BMPs Table

Permits	All stream crossing repair, replacement or maintenance within waters of the state will be reviewed with by WSDFW, and permitted with an HPA, as necessary. as negotiated with the Services and permitted prior to work.
	When required habitat restoration will be designed and constructed in accordance with applicable permits.
Fish Exclusion	Fish will be excluded from the construction area using appropriate methods such as the use of nets, dewatering at a controlled rate, and removal of stranded fish according to HPA permit conditions. as negotiated with the Services.

PART 2 – Best Management Practices

Page 2.6

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.87](#) from Karen Walter of the Muckleshoot Tribe.

Spelling error corrections:

Protect Areas to be ~~Disturbed~~ Disturbed from Stormwater Runoff.

~~Minimize~~ Minimize Runoff Velocities

Use berms, diversions, pumps, dams, barriers, **sediment traps** and constructed waterways to intercept runoff and divert it away from cut-and-fill slopes or other disturbed areas. Install these measures before beginning maintenance **and/or land-disturbing** activities.

~~Whenever possible, p~~**Plan, install and use construct** sediment trap and basin BMPs before other land-disturbing activities **(except in emergencies).**

Pages 2.13

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.89](#) from Karen Walter of the Muckleshoot Tribe.

Limitations: Not effective in **areas of high flows** ~~or for removal of high percentage of fine-grained materials.~~ Refer to individual BMP (Part 2) limitations.

BMP: Construction Access Road

Page 2.39

The following changes were made to clarify and improve the accuracy of the language and were based on comments [2.99c](#) and [2.100](#) from Karen Walter of the Muckleshoot Tribe.

Construction Guidelines

- Unsuitable material should be excavated prior to placement of fabric and rock.
- Place an optional "fabric underliner" the full width and length of the access road, as required by design.
- Compact road as appropriate.
- **Drainage is designed to State and Local Design Standards (See Sediment Ponds)**

Page 2.41

Delete "optional" from drawing detail.

BMP: Continuous Berm

Page 2.42

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.101](#) from Karen Walter of the Muckleshoot Tribe.

Limitations

This BMP should not be used:

- Directly in ~~perennial streams or~~ watercourses.
- In front of storm outlets.

BMP: Ditch Lining

Page 2.54

The following changes were made to clarify and improve the accuracy of the language and were based on comments [2.102](#), and [2.103](#) from Karen Walter of the Muckleshoot Tribe.

Add the following:

Limitations

This BMP should not be used:

- **Directly in watercourses unless required by a permit.**

Delete the following:

Construction Guidelines

- When used in watercourses or streams, this BMP must be used in accordance with permit requirements.
- Plan for site specific uses.

- Use design specifications when available.
- Channels should be constructed with a wide and shallow cross section.
- ~~Use of angular rock in applications where turbulent water is present.~~

BMP: Grass Lined Channel

Page 2.68

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.106](#) from Karen Walter of the Muckleshoot Tribe.

- Remove all significant sediment accumulations to maintain the designed carrying capacity. Debris such as litter, car parts, appliance and items that pose a risk to public safety should be removed. Any **LWDM** that falls into the channel and does not pose a threat to public safety or structure damage should be left in place **or relocated to an area that is not a public safety hazard or ROW structure problem.**

BMP: Large Woody ~~Debris~~ Material

Pages 2.88 through 2.92

The BMP title is modified to reflect the definition in WAC 220-110-020 (48). In addition, the following change from large woody debris to large woody material were made to clarify and improve the accuracy of the language and were based on comment [2.107](#) from Karen Walter of the Muckleshoot Tribe.

BMP: Rock Check Dam

Page 2.105

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.115](#) from Karen Walter of the Muckleshoot Tribe.

Limitations

This BMP should not be used:

- When maintenance activities could reduce actual or potential high flow salmonid refuge functions, this BMP will only be used if:
 - Required or allowed by permit conditions.
 - Required by other regulations.
- **When it affects fish passage.**

For applications outside of watercourses or streams, there are no limitations, other than design constraints.

Construction Guidelines

- **In locations where rock check dams are required, rock check dams must be placed in accordance with design and permit conditions.**

- The maximum height of the dam shall be 3 feet.
- The center of the check dam must be at least 6 inches lower than the outer edges.
- For added stability, the base of the check dam can be keyed into the soil approximately 6 inches.
- Maximum spacing between the dams should be such that the toe of the upgrade dam is at the same elevation as the top of the downgrade dam.
- Filter fabric may be used under the stone to provide a stable foundation and to facilitate the removal of the rock.
- Use in small open channels.
- Refer to sketches on following pages for details.

BMP: Stream Bank Stabilization (Bio-Engineering)

Page 2.141

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.120](#) from Karen Walter of the Muckleshoot Tribe.

Description

This BMP utilizes vegetation as a method of stabilizing stream banks. Use of stream bank stabilization requires design. ~~For example: see DOE, WSDFW, and/or King County Bank Stabilization Guidelines~~ **Use of this BMP will be determined through the permit process for maintenance work, however, this would normally be done as a Capital Improvement Project (CIP).**

BMP: Stream Bypass

Page 2.142

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.121](#) from Karen Walter of the Muckleshoot Tribe.

Construction Guidelines

- Stream bypass BMPs must be installed according to applicable permit requirements.
- Refer to Appendix ~~BE~~ for Fish Exclusion Protocols.
- Determine best method for specific site.
- Discuss strategy with crew.
- Work quickly to avoid water contamination by sediment.
- ~~Ensure pipe outlet is stabilized~~ **Stabilize pipe outlet to minimize prevent** scour and erosion.
- Pump and bypass should be designed or reviewed by an engineer to ensure capacity can handle peak flows.
- **Ensure that stream bypasses do not entrain salmonids at pipes and pumps.**

BMP: Streambed Gravel

Page 2.146

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.122](#) from Karen Walter of the Muckleshoot Tribe.

Streambed gravel is ~~sediment-free~~, non-angular gravel of variable sizes used for habitat protection/maintenance, **bridge** maintenance or culvert replacement (which may be watercourses or streams).

BMP: Temporary Sediment Trap

Page 2.155

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.125](#) from Karen Walter of the Muckleshoot Tribe.

Applications

This BMP may be used below disturbed areas where the total contributing drainage area is less than 3 acres. **Drainage areas larger than 3 acres may use other BMPs such as Siltation Ponds, or Settling Tanks, as defined in applicable permit conditions.** It may also be used where the sediment trap will be used no longer than 18 months. This BMP may be used in combination with other BMPs.

BMP: Turbidity Curtain

Page 2.162

The following change was made to clarify and improve the accuracy of the language and was based on comment [2.176](#) from Karen Walter of the Muckleshoot Tribe.

Limitations

This BMP should not be used:

- ~~Or placed across the main flow of a significant body of water.~~ **Across the entire flow of watercourses or streams.**
- To cross more than 2/3 of the main flow of any salmonid bearing water at the time of the year when any life history stage of salmonids are expected to be present.
- Where flow volume or water velocity inhibits BMP function.

BMP: Vegetative Buffer

Page 2.168

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.127](#) from Karen Walter of the Muckleshoot Tribe.

Limitations

This BMP should not be used:

- If it creates a potential public safety hazard **according to federal, state, or city safety standards.**
- If it ~~could cause water flow problems that may result in flooding of the roadway~~ **prohibits infiltration or prevent sheet flows.**

Glossary

Page G6

The following definition is being added to the glossary based on comment [2.92](#) from Karen Walter of the Muckleshoot Tribe.

"Gravel" – shall consist of crushed, partially crushed, or naturally occurring granular material or loose round rock of variable sizes produced in accordance with the provisions of Section 3-01.¹

Page G7

The following definition is being added to BMP Outcomes based on comments [2.58](#), [2.91](#), [2.106](#), [2.107](#), [3.31](#), and [3.40](#) from Karen Walter of the Muckleshoot Tribe; [3.41](#), and [3.62](#) from Perry Harvester of WDFW; and [3.79](#) from Robert Kelly of the Nooksack Tribe.

"Large woody material" – means trees or tree parts larger than four inches in diameter and longer than six feet and root wads, wholly or partially waterward of the ordinary high water line.²

Page G12

The following definition is being added to the glossary based on comment [2.92](#) from Karen Walter of the Muckleshoot Tribe.

"Streambed Gravel" – is non-angular gravel of variable sizes.

Appendix E: Fish Exclusion Protocol

Information Logs

Page E.3

The following change was made to clarify and improve the accuracy of the language and was based on comments [2.128a](#), and [2.131](#) from Karen Walter of the Muckleshoot Tribe.

Add the following second paragraph:

¹ Standard Specifications for Road, Bridge and Municipal Construction 2000.

² WAC 220-110-020 (48).

Handling of an ESA listed species during fish exclusion activities will be documented and reported to USFWS or NOAA Fisheries. Specific information will include: date of collection; city or county; Township, Section, Range; species; size; number of individuals; method of removal and disposition.

Isolate the Area

Page E.4

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.132](#) from Karen Walter of the Muckleshoot Tribe.

Install block nets at upstream and downstream locations to isolate the entire affected stream reach and prevent fish and other aquatic wildlife from moving into the work area. Block net mesh size, length, type of material, and depth will vary based on site conditions. Generally, block net mesh size is the same as seine material (9.5 millimeters stretched). Block nets are installed securely along both banks and in channel to prevent failure during unforeseen rain events or debris accumulation. Some locations may require additional block net support such as galvanized hardware cloth, additional stakes, or metal fence posts. Block nets are left in place throughout the maintenance activity and may require leaf and debris removal to ensure proper function. Following initial environmental staff oversight, a staff person should be designated to monitor and maintain the nets. Block nets are left in place throughout the maintenance activity and may require leaf and debris removal to ensure proper function. **Block nets should be checked regularly for proper performance.** Crew supervisors, leads, and/or crewmembers may check these nets. The flow rate in the stream and the amount of leaves and other debris collected on the net will determine how often the nets need to be checked.

Dip, Seine or Fyke Net Exclusion

Page E.4

The following changes were made to clarify and improve the accuracy of the language and were based on comment [2.133](#) from Karen Walter of the Muckleshoot Tribe.

Net drags or seining through the isolated stream reach may also be used. Depending on the site, various lengths of 9.5 mm stretched nylon mesh minnow seines are used throughout the isolated stream reach. ~~Seining follows modified protocol of Parametrix (1980) and Muckleshoot Fisheries Department (Warner and Frits 1995).~~

Biological Review of the Regional Road Maintenance ESA Program Guidelines

1.0 Summary

The following changes were made to clarify and improve the accuracy of the language between the RRMP and the BR and were based on comment [3.7](#) from Perry Harvester of WDFW.

Only activities that fall under the definition of "maintenance" are covered under this Regional Program. Below is the definition of the term "maintenance":

Maintenance: Repair and maintenance include activities that:

- a) are conducted on currently serviceable structures, facilities, and equipment; **and**
- b) involve no expansion of or change in use of such structures, facilities, and equipment beyond those which existed previously; and,
- c) do not result in significant negative hydrological impact.

Repair and maintenance include those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems, ~~and includes or to replacement of dysfunctional facilities.~~ Repair and maintenance also include ~~the replacement of~~ existing structures with different types of structures, ~~provided that~~ **PROVIDED THAT** such replacement is required to meet current engineering standards or by one or more ~~environmental~~ permits and the functioning characteristics of the original structure are not changed. (An example would be replacing a collapsed, fish-blocking, round or wooden culvert, with a new box culvert under the same span, or width of roadway.)

3.0 Species Information

3.2 Life Histories and Biological Requirement

*3.2.1 Chinook Salmon (*Oncorhynchus tshawytscha*)*

3.2.1.1 Puget Sound Chinook Salmon

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.15](#) and [3.17](#) from Karen Walter of the Muckleshoot Tribe.

Classified as critical, 7 are depressed, 10 are healthy, and 7 are considered unknown due to insufficient data (WDFW **et al.** 1993)

Page 41 CRITICAL HABITAT

Excluded are ~~tribal~~ **Indian** lands and areas above specific dams or above longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years).

5.0 Effects of the Action

5.3 Factors Affecting Habitat

5.3.2 Altered Hydrology

Page 57

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.27](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.3 Fish Barriers

Page 89

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.28](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.4 Water Quality

Page 89

The following changes were made to clarify and improve the accuracy of the language and were based on comment [3.29](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.5 Habitat

Page 90 and 91

The following changes were made to clarify and improve the accuracy of the language and were based on comment [3.31](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.6 Harvest

Page 92

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.27](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.6 *Hatcheries*

Page 92

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.27](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.7 *Aquatic Nuisance Species*

Page 92 and 93

The following changes were made to clarify and improve the accuracy of the language and were based on comments [3.27](#) from Karen Walter of the Muckleshoot Tribe.

Delete all references to (CRITFC 1994).

5.3.9 *Regulatory Factors*

Page 93

The following change was made to clarify and improve the accuracy of the language and was based on comment [3.35](#) from Karen Walter of the Muckleshoot Tribe.

Existing policies and programs ~~may~~**are** not be sufficient to address current environmental challenges.

6.0 Analysis of Effects

6.2 Conservation Outcomes of the Regional Program

6.2.3 Blockage Removal

Page 97

The following change was made to clarify and improve the accuracy of the language and was based on comment [3.42](#) from Karen Walter of the Muckleshoot Tribe.

The last sentence in the second paragraph of this section will be deleted as follows:

Sometimes blockages occur directly in watercourses and streams, creating a safety hazard to roads or bridges, as well as a significant hazard to aquatic habitat. Such blockages can lead to catastrophic ROW structure failure, which can have severe adverse habitat impacts. Blockages in watercourses and streams also impede flows, which can adversely affect flow volumes and velocities. As emphasized in the *Guidelines*, blockage removal in watercourses or streams must be done in accordance with federal, state, and local regulations and permit requirements. ~~Blockage removal in watercourses and streams will be done with an HPA and in accordance with the Memorandum of Agreement between WDFW, NOAA FISHERIES, and USFWS, September 1999 (MOA September 1999).~~

6.2.4 Restoration of Flow Velocities/Volumes

Page 97

The following change was made to clarify and improve the accuracy of the language and was based on comment [3.43](#) from Karen Walter of the Muckleshoot Tribe.

Regulating velocities and volumes at discharge points can help establish (or re-establish) flows required for healthy aquatic **life and** habitat.

6.3 Regional Program BMPs

6.3.4 Assessment Documents

Page 103

The following changes were made to clarify and improve the accuracy of the language and were based on comments [2.3b](#), [3.49](#), and [3.71](#) from Perry Harvester of WDFW.

First paragraph second sentence shall be modified as follows:

HPAs are issued by WDFW for activities, ~~primarily within the ordinary high water line~~, that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state pursuant to Chapter 75.20 RCW.

Fifth paragraph, fourth sentence shall be modified as follows:

As stated above, HPAs are issued by WDFW for activities, ~~primarily within the ordinary high water line~~, that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state pursuant to Chapter 75.20 RCW.

6.5.5 Classification: Hydraulic Modification

Page 127

The following change was made to clarify and improve the accuracy of the language and was based on comment [3.61](#) from Perry Harvester of WDFW.

The second sentence in the first paragraph on this section will be deleted.

LWDM would be removed only in rare instances where there is a safety hazard, such as debris built up against bridge abutments or landslides. ~~In many of these cases, loose debris can create a threat to habitat as well as to the public.~~ During the course of an average annual maintenance program, it is far more likely that LWDM would be placed as required by state and local permits, rather than removed for other reasons. Since there are, however instances, where road crews must remove LWDM for safety reasons, this activity is discussed below.

7.0 Conclusion on Conservation

Page 138

The following changes were made to clarify and improve the accuracy of the language and were based on comments [2.3b](#), [3.49](#), and [3.71](#) from Perry Harvester of WDFW.

Table 25, top narrative, third sentence shall be modified as follows:

HPAs are issued by WDFW for activities, ~~primarily within the ordinary high water line~~, that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state pursuant to Chapter 75.20 RCW.

Find, Replace or deleted searches

The RRMP and BR were searched for Large Woody Material (LWD) and replaced with Large Woody Material (LWM) based on comment [2.58](#) from Karen Walter of the Muckleshoot Tribe on the following pages:

Document	Page Numbers
Regional Road Maintenance Endangered Species Act Program Guidelines	
Part 1 – Regional Program	1.37
Part 2 – Best Management Practices	2.4
	2.16
	2.18
	2.67
	2.86 through 2.90
Glossary	G14
Appendix C	C.1
Index	I.1
Biological Review	
Analysis of Effects	104 through 106
	108 through 110
Acronyms	144
Appendix B	1 through 8
Appendix C	1
	2
	7

The RRMP and BR were searched for "sensitive habitat resources" to delete the word sensitive based on comment [2.25](#) from Karen Walter of the Muckleshoot Tribe on page 1.31 of the RRMP.

As of 2002, NMFS changed to NOAA Fisheries. The RRMP was searched for "NMFS" to replace with NOAA Fisheries on the following pages:

Document	Page Numbers
Regional Road Maintenance Endangered Species Act Program Guidelines	
Introduction	i through v
	viii
Part 1 – Regional Program	1.5
	1.10
	1.19
	1.21
	1.24
	1.67
	1.70
Part 3-Application	3.3
	3.6
	3.8
	3.11
	3.20
Glossary	G.9
	G14
Appendix E	E.5

II. Summary of comments received regarding the proposed RRMP

The following is a brief summary of the comments. A more complete summary may be found in section [IV](#) (Responses to comments received) and the complete comments may be found in [Appendix D](#).

Summary of comments by person and organization

1. Martin P. Hayes, Citizen – supports exempting routine road maintenance. Kitsap County Part 3 Application. Road maintenance vs. new projects and/or capital improvement projects.
2. Pete Ringen, Lewis County Engineer – Cost of the RRMP, effect on local jurisdictions, and funding commitment. Utilizing other programs, rather than the RRMP.
3. Perry J. Harvester, Washington State Department of Fish and Wildlife Area Habitat Biologist – Support the development of the program. Cost of the Regional Program, Effect on local jurisdictions, and funding commitment. Road Maintenance vs. new projects and/or capital improvement projects. Chronic repairs, referral of projects, and maintenance as mitigation. Emergency slide and washout repairs, emergency response, and rip rap installation. Permits. Program Element Specific Comments - Compliance Monitoring, Adaptive Management, Biological Data Collection and Best Management Practices (BMPs) and Conservation Outcomes.
4. Grace Crunican, City of Seattle Transportation Director – Integrated Pest Management (IPM). Vegetation Management
5. Robert Kelly, Natural Resources Department Director for the Nooksack Indian Tribe – Road maintenance vs. new projects and/or capital improvement projects. Chronic repairs, referral of projects, and maintenance as mitigation. Emergency slide and washout repairs, emergency response, and rip rap installation. Permits.
6. Isabel Tinoco, Muckleshoot Indian Tribe Director – Requested comment period be extended.
7. Karen Walter, Muckleshoot Indian Tribe Fisheries Department Senior Watershed Coordinator – Road maintenance vs. new projects and/or capital improvement projects. Chronic repairs, referral of projects and maintenance as mitigation. Emergency slide and washout repairs, emergency response and rip rap installation. Permits. Program Element Specific Comments, Compliance Monitoring, Adaptive Management, Biological Data Collection and Best Management Practices (BMPs) and Conservation Outcomes. Biological Review.

III. Public involvement activities that have taken place throughout the RRMP

The Tri-County Salmon Conservation Coalition (TCSCC) included tribal representatives, environmental interest groups, local government groups and other interested parties. The RRMP was developed under the guidance of the TCSCC and was later expanded to include the entire state. The TCSCC Executive Committee consisted of 36 participants and can be found in [Appendix A](#). The TCSCC General Assembly meets at least twice a year. The master mailing list for the General Assembly consisted of 224 participants and can be found in [Appendix B](#).

The Internet web site was used to allow review of the RRMP and later the Biological Review (BR). The RRMP was first placed on the website in December 2000. As comments and updates were incorporated, the RRMP was also updated on the website. The website was distributed to TCSCC, T-2 training bulletin, University of Washington course outlines, County Road Administration Board, and through the below presentations. Comments received were reviewed and, when appropriate, incorporated in the final Regional Road Maintenance ESA Program Guidelines and submitted to NOAA Fisheries for approval.

The TCSCC list of interested parties was expanded to further involve public participation throughout the state. The list includes: 1) All persons on established water quality related publication distribution lists, 2) Both the tribal chair and the contact tribal biologist at first for tribes within the Puget Sound area, but this was expanded to include all tribes in the state, 3) Contacts for each state regulatory agency, 4) Contacts for each county planning department, health department, and public works department, 5) All persons who had attended earlier meetings, and 6) All persons who had formally requested to be on a mailing list. Participation by interested parties varied throughout the years of RRMP development.

Advisory committees were formed and consulted on a number of issues that came up in the development of the RRMP. Surveys and questionnaires were used to evaluate responses and develop policy direction.

In addition, the Regional Forum provided public outreach and invited members of the public to participate in the development of policy direction, by making presentations to concerned citizens, utilities, local governments, federal and state agencies with jurisdiction, and associations. The purpose of these presentations was to accomplish the following tasks:

- Hear a presentation by a Regional Forum member on the overall review process and on development of the RRMP; and
- Ask questions.

These presentations were an innovative means to "get the word out" to affected members of the public that may not have been reached by the more traditional methods. Examples include but are not limited to the Annual Western and Eastern Washington Road and Street Maintenance School (Washington State University); Washington, Oregon, and California Chapters of American Public Works Association; Federal Highway Administration Transportation

Research Board; Pacific Northwest Snowfighters States of Idaho, Montana, Oregon, and Washington; Washington State Weed Association; British Columbia and Washington State Environmental Transportation Exchange; Association of General Contractors; Washington Association of County Engineers, Washington Cities Association; American Water Works Association; Washington State Department of Ecology; and WSDOT liaison Program.

The advisory subcommittees were split into various issues or interests; see [Appendix C](#) for a list of Contacts for Information and Assistance.

Further, public participation in the form of comments received from NOAA Fisheries January 31, 2002 and March 8, 2002 Federal Register public notices; plus comments from NOAA Fisheries and USFWS were reviewed and when appropriate were incorporated into the final RRMP document.

IV. Response to Public Comments Received.
(Full summary of comments follows responses in [Appendix D](#))

1.0 Responses to General Comments

- 1.1 Concern with Kitsap County Application, road maintenance vs. new sewer facilities and/or capital improvement projects. This concern should be looked at more broadly. (A-1, Martin P. Hayes, Citizen)

Response: The RRMP and BMPs are associated with road maintenance on existing infrastructure as defined by the maintenance definition in the RRMP. These maintenance activities do not include the development of new infrastructure (e.g. new sewage conveyance system).

To improve clarity a reference back to the definition of maintenance will be made in each maintenance category in Program Element (PE) 10.

- 1.2 Requests that NOAA Fisheries refrain from considering the RRMP the statewide standard. A distinction should be made between what is considered affordable and appropriate best management practices in the wealthiest and most densely populated part of the State of Washington, and what is affordable and appropriate in the least wealthy and less densely populated parts of the State. (A-2, Pete Ringen, Lewis County Engineer)

Response: Although there is a cost associated with implementing the RRMP, the program does not prescribe specific expenditures, nor does it prescribe specific BMPs. The RRMP is outcome based, allowing agencies the option of selecting the most efficient and cost effective measures that achieve the BMP and conservation outcomes. An individual agency will incur some costs by virtue of the commitment to provide adequate protection for salmonids, but will avoid the development costs of the RRMP.

The RRMP was developed to be less burdensome for small governmental jurisdictions while still achieving ESA compliance. Several rural counties and small cities with relatively small populations actively participated in the development of the program.

Implementation of the RRMP is not mandatory. Agencies have the option of developing their own proposals under the 4(d) Rule, and submitting their proposals to NOAA Fisheries.

- 1.3 We support the development of the RRMP in that it provides a forum for sharing information regarding BMPs, Available Science, and development of techniques and standards for implementing a variety of construction techniques. The RRMP provides a means by which BMPs mitigating maintenance activities can be implemented and refined through adaptive management. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We thank you for your support.

- 1.4 We are concerned that implementation of some of the BMPs and other elements of the RRMP may contribute to long term habitat loss and preclude attainment of Properly Functioning Condition (PFC), as there is little discussion of mitigation for chronic maintenance impacts. There are not established thresholds indicating the maximum frequency that maintenance activities may be performed prior to being identified as a *chronic maintenance problem*. Chronic maintenance should be defined, and the process by which resolution of chronic maintenance might be identified and resolved, should be developed. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The criteria for defining chronic maintenance problems are not easy to identify and should not be based solely on frequency. Chronic maintenance problems may indicate that the life of the structure is complete and redevelopment should be considered. That information will be provided to agency watershed planning offices, regulatory agencies, and/or Capital Improvement Programs (CIP). Maintenance and repairs are expected on any structure. Except for the construction activity itself, maintenance activities are considered mitigation under the original permit when the structure was built.

- 1.5 Specific commitments for funding and implementing compliance and effectiveness monitoring, research, and adaptive management are lacking, and there is risk that a disproportionate amount of funding and effort will be placed on maintenance activities without consideration of the other elements of the program. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The Part 3 Application is completed by each jurisdiction seeking a take limit. The Part 3 Application is the jurisdiction's commitment to implement the 10 program elements of the RRMP.

- 1.6 This plan lacks the specificity to provide certainty that PFCs will be achieved, and in several areas we think it will jeopardize attainment of PFCs. Additionally, attainment of PFCs needs to be evaluated in the cumulative context of other anthropogenic actions, including other land uses that will also affect habitat. (A-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: We disagree. The RRMP compensates for its flexibility by implementing compliance and effectiveness monitoring, adaptive management, and reporting requirements. Furthermore, since we believe that the RRMP will protect and improve aquatic habitat, the cumulative effects of implementing the RRMP will decrease, given other anthropogenic actions remain the same.

- 1.7 Instead of implementing "Emergency", "Imminent Threat", and other routine maintenance activities at the numerous chronic repair sites, the GeoEngineers report recommends road relocation along several reaches, to best accomplish the transportation needs for SR 542, while accommodating the natural river (and habitat

forming) processes. (A-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: Road relocations are beyond the scope of the RRMP. For addition information regarding chronic maintenance problems see response to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

- 1.8 NOAA Fisheries should conclude that continued "routine maintenance" in areas where active channel migration is restricted up to 75% (i.e., along SR 542), WILL impede attainment of PFCs. (A-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: Comment noted. While it is true that some degradation will continue to occur, it is limited in scope. Overall, the RRMP preserves existing habitat function levels and allows natural progression towards PFC where habitat is impaired. Also, see response to Comments [1.7](#), [2.4a](#) and [b](#).

- 1.9 The Muckleshoot Indian Tribe requests that the time period to comment on the RRMP be extended by 30 days, and formally requests an opportunity to meet to discuss the guidelines.

Response: On or about March 8, 2002, NOAA Fisheries published a notice in the Federal Register reopening the comment period for the RRMP. In addition, the Biological Review Subcommittee met with the Muckleshoot Tribe to review their comments on the RRMP.

- 1.10 All of the activities mentioned on page 1.19 and 1.20 should also be coordinated with any affected Indian Tribe. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Reports will be posted on a website. NOAA Fisheries Tribal liaison is working with the tribe to address the communication issues.

- 1.11 The WDFW Fish Passage Design at Road Culverts Manual is not adequate to provide passage for all life stages of salmonids and will not enable the attainment and maintenance of properly functioning conditions. (A-7, Muckleshoot Tribe, Karen Walter).

Response: Paragraph was rewritten to the following:

Compliance with Washington state fish passage regulations is particularly important for conservation when performing culvert replacement work in stream crossings. Washington State law and regulations require that new or retrofit culverts be designed for fish passage. (RCW 77.55.060; WAC 220-110-070). Culvert installation and replacement under these sections requires the issuance of a Hydraulic Project Approval (HPA by the Washington Department of fish and Wildlife (WDFW). All work done under this section will comply with the HPA. To clarify the fish passage criteria defined by WAC 220-110-070, WDFW prepared a design manual entitled "Fish Passage Design at Road Culverts" (the Manual) (WDFW 1999). The Manual was reviewed by the National Marine Fisheries Service, which ~~found~~

concluded that, ~~the standards stated in this publication would enable the attainment and maintenance of PFC for fish passage when designing used for new or retrofit or replacements of existing culverts, the WDFW guidelines should result in improved habitat conditions with the potential to bring impaired habitat on a trend to Properly Functioning Conditions (PFC), and that using the WDFW manual while designing a new culvert should not impair PFC as long as the hydraulic and other fish passage considerations are properly applied~~ (NOAA Fisheries memorandum, Assistant Regional Administrator for Hydro Division to Assistant Regional Administrator for Habitat Conservation Division, November 28, 2001). Therefore, the Regional Program incorporates the relevant considerations for the design of new and retrofit culverts stated in the Manual, as well as other fish passage and habitat considerations addressed in the last chapter of the Manual. (As of the date of this publication, the Manual can be viewed on the Internet at <http://www.wa.gov/wdfw/had/engineer/cm/fpdrc.pdf>.)

- 1.12 The details and standards are left to agencies that do not have the authority to implement and enforce the ESA. It is not the responsibility of either WDFW or the Army Corps to implement the ESA, yet the RRMP proposes such an approach. (A-7, Muckleshoot Tribe, Karen Walter)

Response: ESA is the responsibility of the NOAA Fisheries and USFWS services, but we must comply with local, state, and federal laws and regulations. Under federal and state law, the Army Corps of Engineers (Corps), Washington State Department of Fish and Wildlife (WDFW), and Washington State Department Ecology (Ecology) all have regulatory authority and responsibility for work activities in water. The Regional Program commits to BMP and conservation outcomes that are included in ESA and other regulations.

NOAA Fisheries is working with WDFW specially attend to HPAs issued to RRMP agencies for RRMP activities.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the District Engineer must review all permit applications for potential impacts on endangered species or critical habitat. For the Nationwide Permit Program (NWP), the review occurs when the District Engineer evaluates the preconstruction notification. Based on the evaluation of all available information, the District Engineer will initiate consultation with the USFWS or NOAA Fisheries as appropriate, if he or she determines that the regulated activity may affect any endangered species or critical habitat. Consultation may occur during the NWP authorization process or the District Engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate consultation through the individual permit process. If the consultation is conducted during the NWP authorization process, without the District Engineer exercising discretionary authority, the applicant will be notified that he or she cannot proceed with the proposed activity until ESA consultation is complete. If the District Engineer determines that the activity will have no effect on endangered species or critical habitat, the district engineer will notify the applicant that he or she may proceed under the NWP authorization.

Also, NWP General Condition 11 requires non-federal permittees to notify the District Engineer if any listed species or designated critical habitat may be affected or is in the vicinity

of the project. Again, work cannot begin until the District Engineer notifies the applicant that the requirement of the ESA has been satisfied and that the activity is authorized.

- 1.13 There is no explicit requirement in the RRMP that either WDFW or the Corps work with the Tribe to ensure that its treaty-protected resources are protected and/or restored. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment is outside the scope of the RRMP. Publicly owned road maintenance organizations have no authority over federal and state regulatory programs to require them to consult with tribal governments during their permit review process. However, under the Corps regulations, the District Engineer must review all permit applications for potential impacts on tribal rights. NWP General Condition 8, Tribal Rights is intended to ensure that reserved tribal rights are not impaired.

In addition, there are the tribal/EPA 401 Water Quality Certifications. EPA and Tribal Nations have denied most of the NWPs without prejudice, requiring the applicant to obtain an individual WQ Certification from the appropriate permitting agency.

These must be considered prior to the issuance of the final Corps permit.

2.0 Regional Road Maintenance Endangered Species Act Program Guidelines

Introduction

- 2.1 Page iii is missing two citations. First the 4(d) rule for salmon and steelhead should be cited in paragraph one. Second, the citation to support the statement that habitat degradation is a major factor of decline for bull trout and West Coast listed salmonids. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The NOAA Fisheries citation on the 4(d) rule for salmon and steelhead is located on page ii. This section of the introduction deals with Section 4(d) of the ESA, therefore the second citation would be misplaced in the document.

- 2.2 On pages iii and iv, there is no support for the assertion that road maintenance practices can contribute to the conservation of listed species. It is merely a hypothesis and should be written as such. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. There have been many studies that have demonstrated that stormwater management options (commonly referred to as best management practices) that are applied in urban and urbanizing areas will reduce the impacts of stormwater on flooding, water quality and quantity. Many of these studies are referenced in the Biological Review.

- 2.3 a) Page viii – Permit compliance is spelled out as a requirement; the selection process indicates that BMPs are selected prior to submitting a permit application. There could be potential conflicts between the BMPs and provisions of a permit. The

permitting agency should be provided opportunity to provide early input in selecting the proper BMP, to avoid duplicative effort or conflicting provisions. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

- b) Most of these references incorrectly state that a HPA is required for work within the ordinary high water mark of watercourses. The wording of RCW 77.55.100 should be used to describe when and where HPAs are required. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- c) Caution should be exercised in the application of WDFW's "Fish Passage Design at Road Culverts Manual". The Manual was specifically written to assist in the design of culverts to ensure that *fish passage* is provided, and does not promote the use of culverts as a desirable water crossing structure. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- d) We question the inclusion of water crossing structure replacement activities within the RRMP. Due to the complexity of site conditions and habitat, the potential for unintended channel responses, it is difficult to create standardized BMPs for the replacement of water crossing structures. The current BMPs are inadequate to address the long term adverse impacts associated with culvert installations. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: Please refer to page 2.7 of the Guidelines (Checklist #1). The steps are sequential. Steps 1 through 6 must be completed prior to proceeding to steps 7 and 8. Maintenance crews are required to contact WDFW prior to selecting BMPs. Also, Local/State/and Federal permit conditions must be complied with and will define the use of BMPs.

Response b: Comment noted. The entire document will be searched and any reference to below or within the ordinary high water mark (OHWM) or line (OHWL) will be removed if it is not associated with the definition of "Watercourse" and "river or stream"³. The citation on page 1.62 of the RRMP will be corrected from WAC 220-110-020(41) to (83) to reflect the last update of the Hydraulic Code Rules. As the WAC and RCW are revised they will be referenced within the document.

Response c: See response to Comment [1.11](#).

Response d: We disagree. The BMPs are not static. You must look at the whole Program. The RRMP establishes a Regional Forum (Program Element (PE) 1 on page 1.7 through 1.9), consisting of a Regional Road Maintenance Managers, committed to reviewing and updating RRMP procedures. Any agency that submits a Part 3 Application must participate in the Regional Forum. RRMP specifies quarterly meetings, at which potential changes to both the program elements and to specific BMPs will be discussed. The BMPs will be updated to reflect the best available science. PE 1 also commits the Regional Forum to publish a quarterly

³ WAC 220-110-020 (83).

newsletter on activities related to the RRMP, and to the formation of technical subcommittees to oversee specific elements of the RRMP.

Program Element 10 (PE 10) also provides for flexibility in the BMP selection process, and provides a matrix describing recommended BMPs for the most frequently performed BMPs. The BMP implementation strategy emphasizes the need to train crews and crew supervisors and to monitor the implementation of BMP applications. Permit compliance is specifically spelled out as a BMP requirement in the RRMP. Local/State/and Federal permit conditions will define the use of BMPs and must be met.

2.4 Pages viii and ix suggest two things of concern.

- a) First, there is a statement that this program will be separate from any future development or redevelopment regulations. If this is the intent, then it is difficult to see how this program will be coordinated with other efforts, as well as the purpose of having an "adaptive management philosophy" applied to the RRMP. The RRMP will be meaningless if it does not affect future development and redevelopment program and regulations. (A-7, Muckleshoot Tribe, Karen Walter)
- b) There is no basis to allow the RRMP to be considered "mitigation" since neither the impacts nor the actual mitigation measures that will be derived for the RRMP are explicitly stated. Therefore, the RRMP should not be exempt from development and redevelopment regulations pursuant to the land use or stormwater operational programs or any other future development/redevelopment programs. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Once a structure is developed, maintenance is performed until a structure can no longer be maintained, then it is redeveloped. Preventive maintenance is the sum of all activities undertaken to provide and maintain a serviceable roadway, sewer, and/or water system; this includes corrective maintenance and preventive maintenance as well as minor rehabilitation. Maintenance is not development or re-development.

Response b: "Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" is a requirement of the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and the Hydraulic Code. In addition, any project authorized by a Nationwide Corps permit is required to be properly maintained to ensure public safety⁴. Therefore, maintenance of the ROW and built structures is a part of the mitigation package associated with the construction of the roadway system and is not subject to additional compensatory mitigation.

- #### 2.5
- a) Page ix, Figure 2, there are no established thresholds to identify when maintenance for various projects is defined as "chronic", or how the resulting cause of the need for maintenance is identified. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

⁴ See Nationwide Permit General Condition 2. Proper Maintenance.

- b) Correcting the root cause of needed maintenance should be one of the primary goals of the RRMP, especially with regard to those activities, causing adverse impacts to fish resources.

Response a: Please refer to response Comment [1.4](#), and [3.21](#). Maintenance⁵ of state highways is required pursuant to 23 U.S.C. 116. The maintenance of projects shall be carried out in accordance with policies and procedures issued by the Administrator (FHWA). The State highway department may provide for such maintenance by formal agreement with any adequately equipped county, municipality or other governmental instrumentality, but such an agreement shall not relieve the State highway department of its responsibility for such maintenance. WSDOT is responsible to FHWA in the performance of maintenance activities as outlined in 23 CFR 1.27 and 633.208.

Counties have authority to work in watercourses for the purpose of preventing floods, which may threaten life and property or cause damage to public or private property under RCW 36.32.280, RCW 36.32.290, RCW 36.32.300, and RCW 38.52. The cities have similar authority under RCW 35.32A.060, RCW 35.33.081, RCW 35.33.91 and RCW 38.52.

"Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" is a requirement of the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and the Hydraulic Code. In addition, any project authorized by a Nationwide Corps permit is required to be properly maintained to ensure public safety¹. Therefore, road maintenance of the ROW and built structures are a part of the mitigation package associated with the construction of the roadway system and is not subject to additional compensatory mitigation.

Response b: Please refer to response Comment [2.5a](#).

2.6 Page ix, there is no data to support Figure 2 in the RRMP. It is nothing but a diagram of hope. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The figure is obviously intended to be conceptual rather a set of regression lines of actual data points. As such, it helps illustrate the logic leading to the conclusion that habitat conditions will improve at a greater rate with implementation of the RRMP than without. Without road maintenance, habitat conditions would degrade. Please refer to Biological

Page x of the Regional Road Maintenance Guidelines defines "road maintenance" as:

Maintenance: Repair and maintenance include activities that:

- (a) are conducted on currently serviceable structures, facilities and equipment; and
- (b) involve no expansion of or change in use of such structures, facilities, and equipment beyond those that existed previously; and
- (c) do not result in significant negative hydrological impact.

Repair and maintenance include those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and system or to replace dysfunctional facilities. Repair and maintenance also include replacing existing structures with different types of structures, PROVIDED THAT replacement is required to meet current engineering standards or by one or more environmental permits and the functioning characteristics of the original structure are not changed. An example would be replacing a collapsed, fish-blocking round or wooden culvert with a new box culvert under the same span or width of roadway.

Review section 6.1 Road Maintenance on pages 92 through 93 and Figure 11. Pollutant Containment and Removal Point.

- 2.7 a) Page x, We question the definition of maintenance as applied to the Routine Road Maintenance Program. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- b) The RRMP includes the installation of new culverts. We question why these maintenance activities are not considered new development or redevelopment projects. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- c) We disagree with the premise that, "road maintenance mitigates the impacts of the original construction of road structures". (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- d) We also disagree with the premise that road maintenance necessarily leads to habitat improvement as indicated in Figure 2 on page ix. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: Comment noted.

Response b: The definition does not allow for the installation of a new culvert structure, only the repair, rehabilitation or replacement of any previously authorized, currently serviceable culvert structure. Please refer to response to Comment [2.4a](#). To improve clarity a reference back to the definition of maintenance will be made in each maintenance category in PE 10.

Response c: Please refer to response to Comment [2.3b](#).

Response d: Please refer to response to Comment [2.6](#).

- 2.8 Page x, there is no definition of "major", which is used at the bottom of page x, and elsewhere in the RRMP. Without a definition, this will be left to the interpretation of individual jurisdictions and it is doubtful that the listed species will be conserved. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The definition of maintenance is clear in the paragraph above the sentence containing "major." Federal and State regulations use the word "major" without specific definition. The language in the Guidelines should be consistent with federal and state law.

Part I – Regional Program Elements

Introduction

- 2.9 There are no program elements requiring that maintenance is necessary at a specific location. There is risk that some maintenance activities could be used to justify a budget under the "use or lose it" scenario for funding appropriations. It appears that this plan furthers the undesirable situation where it is easier to repeatedly conduct

maintenance rather than identifying and resolving chronic maintenance problems, and relegates the program participants to treat the symptoms, rather than the problem. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Please refer to response to Comments [1.4](#), [2.5a](#), and [3.21](#). The RRMP is for the maintenance of existing roads, water and sewer systems within the right of way. This does not include the potential impacts associated with the road itself or development and redevelopment of the infrastructure.

Program Element 1: Regional Forum

- 2.10 The proposed Regional Forum is a positive element of the RRMP. This group should provide information and oversight that is currently lacking from watershed road maintenance activities. The Tribe should have the opportunity to participate in this Forum if it desires. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted. RRMP information will be made available for other uses. Page 1.31 (Program Element 8)

Program Element 2: Program Review and Approval

- 2.11 It is not clear as to what standards will be used by the Regional Forum and WSDOT to review programs submitted under the RRMP. It is also not clear as to what standards will be used by NOAA Fisheries/USFWS to review the proposed applications under Part 3. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to Program Element 2, page 1.10 through page 1.14, along with the Part 3 Application, page 3.3, and the Final 4(d) Rule (65 Fed. Reg. 424222).

Program Element 3: Training

- 2.12 We concur that the importance of training cannot be overemphasized. Special emphasis should be placed on selecting the BMPs, which are most likely to achieve the desired outcome, rather than those, which are the least costly. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: For Regional Program training curriculum please refer to RRMP, page 1.17. Course numbers 102(track 2) and 103(track 3) both cover the selection of BMPs. Cost is not one of the variables for selecting BMPs. Selection is based on meeting the conservation outcomes.

- 2.13 It is not clear as to what training is offered by the existing WSDOT Technology Transfer Center and how this training is consistent with other programs that the state is promoted from individual agencies (i.e. WDFW) or the Governor's Salmon Office. One element that will be important for road maintenance personnel is fish identification (particularly juvenile salmonids) and training in habitat assessments. Neither of these

two specific issues is discussed any where in the RRMP, including the current Part 3 applications by specific jurisdictions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The target audience for the training is maintenance crews, not biologists. Therefore, the curriculum is written to demonstrate how to avoid and minimize environmental impacts, due to maintenance and operations, through training in Best Management Practices. Course goals include that each crewmember demonstrates an understanding of:

- *The basics of ESA, including habitat basics and the life cycle of threatened and endangered species.*
- *Regional Road Maintenance ESA Program Guidelines, and how Parts 1, 2, and 3 are used to achieve compliance goals.*
- *Design, installation, and monitoring of BMPs; and*
- *When a biologist is required.*

Habitat assessments and fish identification will not be done by field crews, but by biologists that are already knowledgeable in this field.

Program Element 4: Compliance Monitoring

- 2.14 a) The monitoring protocol does not provide sufficient detail to detect whether or not changes in baseline condition have occurred, and whether or not there is progression towards PFC. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- b) The identification of those responsible for compliance monitoring, the level of monitoring detail require, the temporal parameters of monitoring, and the qualifications of monitoring personnel, should be clarified. Prior to implementing maintenance activities, each agency should be required to provide evidence of their monitoring capabilities. There appears to be some risk that road maintenance projects will be completed prior to any monitoring. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- c) Environmental staff should be supervised by someone other than personnel in the maintenance program to ensure that independent, unbiased assessments of environmental compliance are provided. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- d) Compliance monitoring should not be limited to the periods in which maintenance activities and BMPs are applied. Long term monitoring should also be provided to determine if maintenance activities result in long term adverse impacts to PFC outside of the right-of-way. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- e) Page 1.18 – monitoring should also be tied to weather, and other unexpected, conditions. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: We believe the Compliance Monitoring program to be essential to the successful implementation of the RRMP. NOAA Fisheries has carefully reviewed the monitoring requirements and considers them to be adequate to meet the needs of the RRMP program. NOAA Fisheries, however, can request that the program be modified if it determines in the future that any aspect of the program is not meeting RRMP goals and objectives.

Road maintenance is one of many factors influencing baseline conditions. All of the Limiting Factors influence baseline conditions. Given all the factors influencing the baseline we can only monitor those factors that we have control. This is why the monitoring focuses on BMP implementation.

Response b: We concur that this is an important issue and that staff training is essential for the monitoring program to be successful. Individual jurisdictions will identify their RRMP Compliance Monitoring staff and these individuals will be trained through the RRMP ESA Program curriculum. This training includes all aspects of monitoring protocols. NOAA Fisheries will track the monitoring results and, if necessary, request improvements or revisions in the training program. Also, see response to Comment [2.14a](#).

Response c: See response to Comment [2.14a](#).

Response d: The RRMP monitoring program is limited to evaluating the compliance and effectiveness of the BMPs. Other processes, including the Water Resource Inventory Area (WRIA) planning process, will address watershed level problems.

Response e: Please refer to each individual BMP in Part 2 for Description, Purpose, Applications, Limitations, Construction Guidelines, BMP Maintenance, and BMP Removal. BMP Maintenance contains an inspection requirement. Example, BMP Aqua Barrier.

- *Inspect BMPs several times daily during the workweek. Schedule additional inspections during storm events. Any required repairs shall be made.*
- *Repair punctures with repair kit immediately.*
- *Allow to dry before rolling up for storage.*
- *Store away from chemicals, and above 10°F.*

- 2.15 a) The compliance monitoring requirement is a positive element of the RRMP. However, the Services should commit to evaluating all approved programs (the element uses the word "may" instead of "will"). Otherwise there will be no effective ESA oversight. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Also on page 1.19, under the Outcome Assessments, this section describes water quality monitoring "as needed", which is too broad. There should be a firm requirement to have water quality monitoring for any activity within 300 feet of a water body. (A-7, Muckleshoot Tribe, Karen Walter)
- c) Finally, there should be a requirement to include affected Tribes in all aspects of this program. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: We are glad that the Muckleshoot Indian Tribe Fisheries Department supports the compliance monitoring program element. NOAA Fisheries will provide oversight of the program through its review of the biennial reports and quarterly newsletters by the Regional Forum.

Response b: It is unreasonable to require water quality monitoring for every activity within 300 feet of a water body. The Regional Program specifies requirements concerning the selection, use, maintenance, and installation of BMPs, and as required per a permit condition, water quality will be monitored.

Response c: See response to Comment [1.10](#).

Program Element 5: Scientific Research

- 2.16 Due to varying site conditions and subjectivity in properly selecting and applying the proper BMPs, extrapolating results of specific case studies to other projects may be difficult. However, it is reasonable that general guidance can be provided. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Comment noted.

- 2.17 The beginning of this section recognizes that without scientific data and research "it is impossible to estimate the effectiveness of all BMPs on habitat and species recovery". This statement suggests that we do not currently have any information of BMP effectiveness on habitat and species, which indicates that we cannot assess the level of take; therefore, we cannot show that this 4(d) rule sufficiently conserves the listed species, as required by the 4(d) rules. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We believe that the proposed protocols are adequate to guide the activities of participating jurisdictions and that the measures proposed in the RRMP will contribute to the attainment and maintenance of PFC. NOAA Fisheries will review the biennial reports and quarterly newsletters and, if necessary, require changes in the RRMP to ensure it meets its goals and objectives. To clear up this issue, the first three sentences of Program Element 5 have been deleted.

Program Element 6: Adaptive Management

- 2.18 a) The protocol appears to be quite general and without specific responsibilities by participating entities of the RRMP. Standards should be provided to ensure that adaptive management functions at a reasonable pace. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- b) We question the statement on page 1.22 that, "In nearly all cases, conducting maintenance activities in compliance with the RRMP contributes to the conservation of the species." This statement conflicts with the earlier

statement, "...little data could be found regarding the effectiveness of various BMPs". (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

- c) Spatial and temporal limits of monitoring should be specified. Site conditions should be monitored after a maintenance activity is implemented. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- d) Adaptive management must provide for the modification of BMPs on future projects. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- e) While it is admirable to suggest that it is a goal is to provide mitigation for the original construction of a structure within the right-of-way, there doesn't appear to be a process by which to attain this mitigation in all instances. If the original construction of the road eliminated numerous meanders of a watercourse and the flood plain was disconnected, how is this mitigated through application of the defined BMPs? (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: The training program focuses on the adaptive management process to make sure that responsibilities are clear. See Figure 10, page 1.24, Figure 11, page 1.27, and Figure 12, page 1.28 in the RRMP.

Response b: See response to Comment [2.17](#).

Response c: Worksite spatial and temporal monitoring is included in the checklists, permits and adaptive management. Also, see response to Comments [2.14a](#) through [e](#).

Response d: See response [2.18a](#).

Response e: See page 1.7a of the RRMP. Also, see response to Comments [1.4](#), [2.5a](#), and [3.21](#).

- 2.19 The adaptive management element should have a discussion about the relationship between this 4(d) rule submittal and the future recovery plan that will be developed for listed species. On page 1.23, the Adaptive Management section notes that there will be effectiveness monitoring of BMPs to see if they are achieving specific objectives. The RRMP lacks these specific objectives, thus rendering it impossible to review and analyze the RRMP to determine its potential to sufficiently conserve the listed species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. Program Element 10, BMPs and Conservation Outcomes contain 15 Maintenance Categories. We expect the RRMP will be consistent with the goals of the future recovery plans. Furthermore, each Maintenance Category includes a description of the activity, the purpose of the work, the BMP outcomes, the BMPs, and the potential conservation outcomes. The potential conservation outcomes include the habitat goals that will conserve the listed species.

- 2.20 On page 1.24, there is a section discussing adverse impacts. This section implies that mitigation of adverse impacts is equivalent to eliminating take. However, there is no analysis to support this conclusion. There may be substantial take, particularly of individual populations, even though there is mitigation associated with adverse impacts. Furthermore, given the extent of the, it is doubtful that take will occur on a "one time or infrequent basis". This conclusion could only be supported by a full disclosure of all jurisdictions' maintenance activities, the areas where they occur, the status of the affected population, and the life history stages affected. If several agencies are conducting maintenance activities in a particular basin in a similar timeframe with ineffectual BMPs, then it is possible for the entire year-class of salmonids within the affected basin to be adversely affected by those activities. The result may be a one-time take, however, the take could be significant for a population that is already too low. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We agree that mitigation doesn't necessarily eliminate take. However, Limit 10(ii) of the 4(d) Rule allows for take, as long as the program preserves existing habitat function levels and allows natural progression towards PFC where habitat is impaired. We believe the RRMP contains conservation measures, including consultations with State and Federal biologists, and a monitoring and adaptive management program adequate to prevent and conserve the covered species. The NOAA Fisheries analytical model, the Matrix of Pathways and Indicators (MPI), was used to evaluate the effects of the Regional Program.

Program Element 7: Emergency Response

- 2.21 Emergency response to flooding or other disasters should be focused on providing short-term responses to these events to avoid imminent threats to public health and safety, public or private property, and environmental degradation. This may include placement of temporary structures, which may be removed after the threat is over. The long-term responses to natural disasters could occur after the threat is no longer imminent. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We agree. Please refer to page 1.30 of the RRMP. Emergency responses are limited to stabilizing the area.

- 2.22 While we understand the desire to include the Emergency Response element in the RRMP, the definition of an "emergency" is vague and left to the person who perceives the emergency. An example of "serious environmental degradation" could be last year's landslide on the Cedar River that occurred after the Nisqually earthquake. Several public works agencies thought that the slide was causing serious environmental degradation and wanted to bring in heavy equipment and haul the material out, stabilize the landslide with rock, etc, when the landslide actually provide a significant amount of wood and sediment, both of which are lacking in the Cedar River. This section should be modified to define "imminent threat", "danger to public or private property", and serious environmental degradation" so that is not totally open to anyone's interpretation or poor planning. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. There are many definitions of the term "emergency" as found in the federal and state environmental laws. All of these definitions relate to situations where unanticipated events have occurred requiring response activities that must be taken to prevent the loss of property or injury to the public. That criterion is the same as found in RCW 47.28.70. The statute governs situations where highway work is required to protect the facility and the traveling public from the consequences of an accident, disaster, or other emergency. Therefore, the concept of an "emergency", as that term is used in various environmental laws, may be applicable to the proposed work.

Also, please see attached [Appendix E](#), Attorney General's Opinion regarding emergencies.

Program Element 8: Biological Data Collection

- 2.23 The scope of the biological data collection element appears too narrow to capture many potential adverse impacts, and it will potentially affect BMP selection. Collection and monitoring of biological data before, during, and after maintenance activities should be expanded beyond the right-of-way, especially for projects such as bridge maintenance, bank armoring, LWD removal, or dredging and sediment removal within natural watercourses. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The collection and monitoring of biological data outside the ROW is beyond the scope of the RRMP. The most important requirement is that data collected are representative of the monitored activity. Therefore, monitoring will be focused on the RRMP program compliance.

- 2.24 The beginning of this section claims that routine road maintenance activities without BMPs "have a slight cumulative impact on aquatic habitat, the extent and magnitude of that impact is completely unknown". Routine road maintenance activities without BMPs have had more than slight cumulative impact on aquatic habitat (see Spence et al 1996; Gregory and Bisson 1997; NMFS 1998, etc.). Furthermore there is something known about the extent and magnitude from existing information (Booth 1991; Booth and Jackson 1994; May et al.1997). These statements are misleading and should be modified. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We concur that the existing language should be changed. We will delete the first sentence on page 1.31.

- 2.25 Also on page 1.31, the first bullet mentions that biological data will be gathered to identify sensitive habitat resources within Rights of Ways. "Sensitive habitat resources" are not defined in the RRMP. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We concur and deleted the word "sensitive".

- 2.26 Again on page 1.31, the third bullet indicates that there are places where the guidelines will be applied and places where they will not be applied. It is not clear as to why this statement is in the guidelines. The Guidelines should apply to all activities seeking 4(d)

coverage via the RRMP and not left to the discretion of an individual. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We agree that the Guidelines should apply to all routine road maintenance activities covered by limit 10(ii) of the 4(d) Rule. The intent of this passage is to provide guidance to maintenance crews in the selection of BMPs that will be applied to eliminate or reduce impacts of maintenance activities on streams, wetlands, and water bodies. Not all activities will adversely affect streams, wetlands, and waterbodies, and therefore won't need BMPs.

2.27 There are roadside "ditches" that are actually salmonid-bearing waters. There should be a map in the RRMP that indicates where these areas currently are and a program to collect additional information to make sure that the most protective BMPs are put into place where they are needed, i.e. fish-bearing waters. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Page 1.57 – Roadside ditches that are watercourses and streams are covered in Maintenance Category Watercourses and Streams. Work within Watercourses and Streams require an HPA permit (and other permits as required) conditions apply.

Program Element 9: Biennial Reports

2.28 The formal reports and the quarterly newsletter should be automatically sent to the Tribe when they are sent to the Services. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [1.10](#).

Program Element 10: BMPs and Conservation Outcomes

2.29 Many of the BMP outcomes (see page 1.108) are not related to protection of the environment, but appear to be the desired outcomes of the maintenance activities. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: This is correct. The BMP outcomes were developed to integrate routine road maintenance and operation activities with protecting and preserving the natural resources along with citizens' health and safety needs. Road maintenance organizations are entrusted with public monies to maintain the road system; we are also entrusted with being good stewards of the public ROW and the environment associated with the road system. The underlying concept behind meeting outcomes is to attain the combined overall goals; therefore, BMP outcomes are used to balance all of these needs.

2.30 There appears to be a conflict between the BMP outcomes identified on page 1.33 and activities identified in the maintenance categories. As a result, long term and cumulative habitat risks may not be adequately addressed. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. See response to comment [2.29](#). Maintenance work consists of maintaining existing road and ROW structures. As defined in the maintenance definition, road maintenance is not development or redevelopment. Routine road maintenance work will not promote future construction of other activities that would not otherwise occur without their completion. The RRMP provides a management tool for conserving listed species within the state of Washington. Thus, its cumulative effect will be to add to the ongoing and planned state, local, and private integrated planning efforts.

- 2.31 Replacement of infrastructure should NOT be defined as "maintenance", as it is beyond the scope of this plan to adequately identify and address all environmental concerns for these types of projects. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree; replacement is an essential component of the definition of maintenance and mitigation used in federal and state regulations.

- 2.32 It is not clear what is meant by the term 'resource availability'. If it means financial resources to do adequate planning, design, and mitigation, then Services should not accept the RRMP because it is too discretionary and will not sufficiently conserve the listed species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Resource availability is a listed factor for selecting BMPs because occasionally materials that are proposed by a resource agency are not available. In these cases site specific conditions would apply.

- 2.33 On page 1.34, there are three bullets that describe the purpose of the Regional Program BMPs. It is not clear in this section (or elsewhere) if all three of these bullets apply to each BMP activity or not. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Yes, all BMPs fit into these three basic outcomes. Program Element 10 contains 15 Maintenance Categories with general BMP information that references one or more of the eight site-specific Part 2 BMPs outcome categories. The BMP Outcomes Categories Matrix (pages 1.37 – 1.38, 2.18 – 2.19 and Appendix C) is a tool used for selecting site-specific BMPs. Use Program Element 10: Maintenance Categories (page 1.45 – 1.111) and the Part 2 site-specific BMPs together to achieve the conservation objectives.

- 2.34 BMPs will be selected prior to obtaining necessary permits. This could create potential conflicts between provisions of a permit and the selected BMP. Permitting agencies should be involved in the initial pre-project review process and opportunity to participate or comment on the selection of the BMP to avoid conflicts. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comment [2.3a](#).

- 2.35 Page 1.37 – The BMP matrix appears suitable for construction activities, but appears insufficient to address the long term impacts associated with maintenance activities. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The matrix was designed as a tool for selecting and using BMPs. PE 10 Maintenance Categories identify the "Conservation Outcomes" that could be achieved while performing road maintenance activities. These conservation outcomes are the result of using BMPs to conserve aquatic species. Monitoring and adaptive management elements will identify and correct deficiencies in BMP selection and implementation.

- 2.36 a) On page 1.41 there is a sample checklist to assist the jurisdictions with determining which BMPs to apply to which projects. In this checklist, there is a question regarding fish presence. It is not clear how this will be determined without maps in the RRMP. How will the individual filling out the checklist determine fish presence? (A-7, Muckleshoot Tribe, Karen Walter)
- b) Even King County's submittal in Part 3 fails to note that they have public rules regarding the assumption of fish presence, so it's not clear that these public rules will apply to their RRMP or not. These public rules themselves may not be adequate to protect salmonid bearing water; however, without the explicit intent to use them, it is not clear what standard King County will be using. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Unfortunately, most jurisdictions do not have current fish presence maps ; therefore the training curriculum teaches the maintenance crews to always assume salmonid species are present in the system and to contact environmental support staff or the WDFW Area Habitat Biologist (AHB).

Response b: King County crews will receive the RRMP training. They will be trained to assume salmonid species are present in the system and to contact environmental support staff or WDFW AHBs.

- 2.37 The Sample "Pre-construction and Pre-maintenance Meeting Checklist" should include suggested measures to identify the need for maintenance and attempt to reduce future maintenance needs. It should include some means of determining if the maintenance activity is defined as a chronic maintenance problem. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. See response to comments [1.4](#), [2.5a](#), and [3.21](#).

- 2.38 On page 1.42, in the "Pre-Construction and Pre-Maintenance Meeting" checklist it notes that if fish exclusion is required, then the applicant is to follow the protocol in Appendix E. Appendix E as written does not require the applicant to document take and supply this information to the Services and the Tribe. Since fish exclusion techniques are the most likely opportunity for direct take to occur, the Services should require that the applicant's record and report take to the Services and the Tribe. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Fish exclusion can only be done by a properly trained biologist who is authorized by WDFW under a special collection permit (See Appendix E, page E.2). WDFW is required to report annually on the status and numbers of fish handled.

In addition, data is collected for research purposes (See Appendix E, page E.3, Information Logs). A condition of the WDFW special collection permit includes: "Due to the presence of threatened or endangered species, a valid permit from the NOAA Fisheries or USFWS may be required before sampling these waters. This permit (WDFW) will not be valid without necessary federal permit(s) on site while collection activities are underway.

Add to the Guidelines: Any contact during fish exclusion activities with an ESA listed species will be documented and reported to USFWS or NMFS. Specific information will include: Date of collection; city or county; Township, Section, Range; species; size; number of individuals; method of removal and disposition.

A. Maintenance Categories

- 2.39 a) There is no mention of the potential risks to fish or fish habitat as a result of performing the maintenance activity. These should be included for consideration in selecting the appropriate BMP. Perhaps there should be a matrix, which helps determine risk associated with applying various maintenance activities. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- b) The potential conservation outcomes resulting from implementation of the various BMPs appear to be overstated. There is little reference to existing data, or data from monitoring, to provide confidence in these claims. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- c) There is little discussion regarding the potential cumulative impacts resulting from repeated maintenance activities. Maintenance activities may occur at such frequency that the adverse impacts are perpetuated, and PFC is precluded. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- d) The maintenance BMPs appear to only address the short term, site specific impacts and will not likely provide adequate protection and restoration of natural processes on a larger scale. Avoiding or improving specific elements of habitat through application of BMPs, without them being part of a comprehensive watershed restoration plan, may preclude attainment of PFC. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: We believe that routine road maintenance activities covered under Limit 10(ii) of the 4(d) Rule have a generally low risk of take, and that the BMPs, by definition, are generally proven to be effective. We recognize that those activities and BMPs involving in-water work with a high potential for adversely affecting fish habitat need more scrutiny. The RRMP monitoring program was developed to address this need. We expect some "fine-tuning" to

occur as all parties observe and adjust in the first few years of Program implementation. Also, see response to Comment [1.2](#).

Response b: See response to Comments [1.4](#), [2.39a](#), and [3.21](#).

Response c: See response to Comments [1.6](#), and [2.39a](#).

Response d: Comment noted. As comprehensive watershed restoration plans are developed, NOAA Fisheries will re-evaluate on-going and proposed activities affecting resources within the watersheds. Also, see response to Comment [3.21](#).

2.40 The conservation objectives listed for each of the maintenance categories are written too broadly and should have a defined, measurable objective. Otherwise, it is impossible to discern if the BMP activity is meeting the project goals or not. Furthermore, such a broad approach appears to be inconsistent with requirements for NPDES permits under the Clean Water Act. The Environmental Protection Agency should be consulted prior to the Services agreeing to this approach under the new Clean Water Act and Endangered Species Act integration MOA. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Not all agencies are required to have NPDES permit. Those agencies that do, will comply with their other permits. Also, see response to Comment [2.39a](#).

Maintenance Category # 1 – Roadway Surface

- 2.41 a) This category will allow the installation of roadway surfaces, which implies new pavement, not maintenance of existing pavement. (A-7, Muckleshoot Tribe, Karen Walter)
- b) It will also allow new access roads. Both of these activities should not be allowed in the RRMP. (A-7, Muckleshoot Tribe, Karen Walter)
- c) On page 1.46, the RRMP notes that shoulder work will "increase infiltration or biofiltration", which is not accurate for areas where the shoulder will be paved unless a porous material is used. See page 1.45 where gravel shoulders may be paved. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: The activities that are included under Roadway Surface must meet the definition of road maintenance, which can be found on page x. In most cases, road maintenance activities do not involve increasing impervious surface. Significant increases in impervious surface within the right-of-way are part of a Capital Improvement Project (CIP), which, when federally funded or permitted, fall under ESA Section 7 review process. Under some circumstances, maintenance activities do result in an increase in impervious surface for safety or environmental reasons, and do not add capacity. Paving the full existing gravel shoulder for short distances, with no addition to the road base footprint (no widening of shoulder gravel), would be maintenance.

Response b: Activities must meet the definition of road maintenance. Occasionally stormwater facilities that are turned over to state, county, or city agency's to maintain may not have access roads necessary to maintain them. In some cases construction access roads are installed and removed as needed to maintain some structures.

Response c: Page 1.46 shoulder work: (states) maximize opportunities for shoulder work, which will increase infiltration or biofiltration.

Maintenance Category #2 – Enclosed Drainage Systems

- 2.42 a) Again installation is used in the list of activities, which could mean that currently opened drainage systems could be put into pipes and enclosed. This is unacceptable. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Also the first paragraph mentions that enclosed systems will be designed to current standards without listing what those standards are. The standards likely vary by jurisdiction and may not be adequate to sufficiently conserve listed species. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: No. Installation refers to existing enclosed drainage systems that need to replace dysfunctional facilities. Enclosing opened drainage systems into enclosed system changes the structure beyond those that existed previously. This would be construction of a new system and would be beyond the scope of the definition of maintenance.

Response b: We agree; standards vary. Additionally, with new technology they change, therefore we must meet the current permit standards that are applicable at the time the work is being accomplished.

Maintenance Category #3 – Cleaning Enclosed Drainage Systems

- 2.43 Page 1.54 – One of the BMP outcomes should be to conduct this maintenance activity within the standard work window for a specific stream. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: There is no need to have a work window BMP for enclosed drainage system activities.

Maintenance Category #4 – Open Drainage Systems

- 2.44 Page 1.57 – 1.58 – In some instances cleaning ditches may exacerbate sedimentation of watercourses. BMP outcomes should include maintenance of natural, vertical and lateral channel stability. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: This is a standard condition of the WDFW HPA permit on Maintenance Category #5: Watercourses and Streams and not for Maintenance Category #4: Open Drainage Systems. Please refer to pages 1.62 through 1.66 of the RRMP.

- 2.45 a) The RRMP on page 1.57 notes that open drainage systems in this category are not watercourses, streams, or wetlands, which clarifies the intent. However, since there is no data in the RRMP to delineate watercourses, streams, or wetlands from open drainage systems, it is not clear how applicants will know the difference. This is a relevant concern because category #4 allows many activities that could adversely affect salmonid habitat without mitigation. (A-7, Muckleshoot Tribe, Karen Walter)
- b) On page 1.61, one of the habitat goals for category #4 is to "protect downgrade habitat". It is not clear what is meant by this goal, where it applies, etc. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Crews are taught to assume open drainages are watercourses and to ask if an HPA permit (and other permits as required) apply. If an HPA is required, then the open drainage system is a watercourse, stream or wetland and covered in Maintenance Category #5 – Watercourses and Streams. If not, then it's an open drainage system covered in Maintenance Category # 4 – Open Drainage Systems.

Also, ditch cleaning is mitigation. "Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" is a requirement of the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and the Hydraulic Code. In addition, any project authorized by a Corps permit is required to be properly maintained to ensure public safety⁶. Therefore, road maintenance of the ROW and built structures are part of the mitigation package associated with the construction of the roadway system and is not subject to additional compensatory mitigation.

Response b: Removing or reducing the amount of material (sediment, debris, trash, etc) that could move down grade will help to "protect downgrade habitat".

Maintenance Category #5 - Watercourses and Streams

- 2.46 a) This category begins by using the definition of a "watercourse" and "river or stream" from the Washington Administrative Code for Hydraulic Permits administered by WDFW. If this definition will be used, then any jurisdiction implementing the RRMP should be required to modify their codes to use this same definition. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Furthermore, there should be a map that shows these areas based on this definition for each individual jurisdiction seeking coverage from the RRMP. (A-7, Muckleshoot Tribe, Karen Walter)

⁶ See Nationwide Permit General Condition 2. Proper Maintenance

Response a: Requiring jurisdictions to modify their codes is beyond the scope of the RRMP because all jurisdictions are required to comply with the 'Hydraulic Code' (RCW 75.20.100-160).

Response b: RRMP doesn't require maps. Program Element 8: Biological Data Collection on page 1.31 requires each participating agency to gather the following data:

- *Identification of habitat resources within ROW.*
- *ROW habitat location to make BMP decisions.*
- *Train and alert staff where to apply the guidelines.*

Therefore, we do not believe it is necessary to include that level of technical information in the Part 3 Applications.

- 2.47 a) Page 1.62 – we question whether it is appropriate to define and include "replacement of structures" as maintenance activities. Structural replacement should be specifically defined and limited. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- b) Projects involving maintenance activities, which remove bedload and vegetation from natural watercourses, are indicative of a flaw in project design. We are concerned that these practices are defined as maintenance activities, due to the potential short and long-term risk to fish resources. Thresholds or standards along with who will determine when they were met should be identified. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)
- c) BMP outcomes regarding maintenance of instream LWD are not adequately identified. Planting vegetation without allowing recruitment or transport of LWD within a watercourse, does not provide sufficient mitigation to avoid impacts to fish habitat. Debris may be relocated to prevent problems to structures, but should not be removed. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response a: See response to Comment [1.1](#).

Response b: This will be a condition of the permit.

Response c: See response to Comment [2.58](#).

- 2.48 Also, on page 1.62, this category notes that maintenance activities within waters of the state will be reviewed prior to work by WDFW, which is appropriate. However, this section fails to describe the process by which the Army Corps of Engineers (Corps) will review projects that may occur within waters of the United States. (A-7, Muckleshoot Tribe, Karen Walter)

Response: There are many required environmental permits (CZM Cert., HPA, Aquatic Use Authorization, ESA, NPDES Construction Sites, NPDES Municipal Stormwater, Water Quality

Cert., Section 10 & 404, Shoreline Permits, Floodplain Development Permit, Critical Area Ordinances, etc.) when working in and around water. Each one is administered by a different agency with different responsibilities. However, the state legislature has given WDFW the responsibility of preserving, protecting, and perpetuating all fish and shellfish resources of the state. Activities falling within the criteria for review by the U.S. Army Corps of Engineers (Corps) generally will be reviewed by the Corps. However, many road maintenance activities in waters of the U.S. are "Discharges not requiring permits"⁷. Those maintenance activities requiring permits from the Corps may undergo review by the Services through the Section 7 process; therefore it would be misplaced in the document.

- 2.49 on page 1.62, there is no guidance about the training/qualifications for "environmental support staff" who will review work under this category. Furthermore, there is no guidance, standards, etc. to determine how this support staff will determine if a facility meets the definition above. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Page 1.62 proposed maintenance activities, within the waters of the state, would be reviewed prior to work with the Washington State Department of Fish and Wildlife.

- 2.50 page 1.63, please define/describe how one determines "where safety is compromised". (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add "ROW structure" and delete safety.

- 2.51 On page 1.64, see previous comment regarding review by ACOE. Also on this page, under fish exclusion, the RRMP notes that applicants must follow standards "according to HPA permit conditions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [2.48](#). Also, delete "as negotiated with the services".

- 2.52 On page 1.65, disturbed areas should be seeded and replanted with native species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Plantings must be in accordance with permit requirements. Also, on page 1.108 Biological Control: Another application of biological control agents involves reintroducing native plants to a site. These plants are introduced to an area where they grow more rapidly and successfully compete against existing weeds and exotic vegetation. Native species are well adapted to site conditions and most will overtake weeds.

- 2.53 Sediment accumulations should be removed prior to removal of BMPs, not after. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

⁷ See 33 CFR 323.4(a)(2) – Maintenance, including emergency reconstruction of recently damaged parts of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design. Emergency reconstruction must occur within a reasonable period of time after damage occurs in order to qualify for this exemption.

Response: Replace after with prior.

- 2.54 On page 1.66, there is a goal to identify chronic sediment deposit problem sites without defining how these sites will be identified (i.e. is the standard someone's back yard or salmon redds) and what happens once these sites are identified. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [1.4](#).

- 2.55 There are no identified BMPs, which directly address the interim LWD habitat needs if it is removed. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Please refer to WAC 220-110-150 Large woody material (LWM) removal or repositioning. This will be a condition of the permit.

Maintenance Category # 6 – Stream Crossings

- 2.56 Again we question whether it is appropriate to define and include "replacement and installation of structures", as maintenance activities. We assume this could include new structures. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Please see response to comment [1.1](#).

- 2.57 a) Affected Tribes, not just WDFW, should also review any activity conducted under this category. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Stream crossings can interfere with habitat forming processes and preclude or prolong properly functioning conditions. This category should be rewritten to recognize this problem and to identify ways in which it will be avoided. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Please see response to comments [1.10](#), and [1.13](#).

Response b: We agree with the statement; however, we disagree that this section should be rewritten. Only activities covered under the definition of maintenance are covered under this program.

- 2.58 Also on page 1.67, in the last bullet, please remove the word "debris" from this section since it could be interpreted to mean wood (i.e. LWD). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Debris is a standard term. However, we agree to add the following:

1. Large Woody Material to the glossary; and

2. *Language in Maintenance Categories 5, Watercourses and Streams; 6, Stream Crossings; and 9, Bridge Maintenance. LWM will be relocated within the ROW to help maintain stream forming processes and to support fish habitat as permit, public safety and ROW structure conditions allow.*

3. *RRMP and BR will be searched for LWD and replace with LWM.*

2.59 The scheduling of stream crossings should follow the most conservative standard to protect salmonids. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The RRMP makes provisions for the timing of maintenance activities to avoid or minimize fish impacts from in water work. The RRMP requires the applicant to consult with WDFW biologists during the HPA permitting process (page 1.64).

2.60 The fish exclusion standards in the RRMP should be the most conservative to protect salmonids. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see response to comment [2.38](#). Fish exclusion can only be done by a properly trained biologist who is authorized by WDFW under a special collection permit (See Appendix E, page E.2).

2.61 There is no requirement that habitat restoration will occur under this category. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see page 1.68. Road crews will implement all conditions required by an HPA for the work activities. Exposed and unworked soils shall be stabilized by application of effective BMPs. Minimize disturbance to riparian vegetation:

- *Mark job site.*
- *Flag work area.*
- *Position equipment to protect riparian habitat.*

Restore vegetation appropriate for site conditions within riparian areas. Habitat restoration to be designed and constructed in accordance with applicable design and permits.

In all cases, capital or major restoration projects must be done in accordance with federal, state, and local regulations and permit requirements.

2.62 On page 1.69, the RRMP identifies a goal to protect habitat and watercourses or streams by performing maintenance; however, there is no data to suggest that this will or has occurred in the past. Perhaps the goal should be re-written as follows: *Protect habitat and watercourse or stream while performing maintenance.* (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree that there is no data to suggest that performing maintenance protects habitat. Street sweeping, using equipment based on new vacuum-assisted technologies, can

significantly reduce pollutant wash off from urban streets. Weekly to bimonthly sweeping programs can achieve reductions of up to 80 percent in annual total suspended solids and associated pollutants (Sutherland and Jelen, 1996)⁸

Add new bullet:

- *Protect habitat and watercourse or stream while performing maintenance.*

2.63 Page 1.70 – The reduction of flooding is not necessarily a desirable habitat goal, as many of the desirable habitat features are created through flood events. Natural rates and magnitudes of flooding and erosion of coarse sediments are important processes for the maintenance of riverine ecosystems. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Comment noted.

2.64 On page 1.70, culvert replacement work should be striving to restore habitat processes in addition to providing fish passage. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment Noted. Please see page x, Definition of Road Maintenance which states: Maintenance: Repair and maintenance include activities that:

- (a) are conducted on currently serviceable structures, facilities and equipment and*
- (b) involve no expansion of or change in use of such structures, facilities, and equipment beyond those that existed previously; and*
- (c) do not result in significant negative hydrological impact.*

*Repair and maintenance include those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems or to replace dysfunctional facilities. **Repair and maintenance also include replacing existing structures with different types of structures. PROVIDED THAT replacement is required to meet current engineering standards or by one or more environmental permits and functioning characteristics of the original structure are not changed. An example would be replacing a collapsed, fish-blocking round or wooden culvert with a new box culvert under the same span or width of roadway.***

Also, see response to Comment [3.12](#).

2.65 On page 1.71, the RRMP indicates that habitat restoration work might be done, meaning that it is discretionary, (A-7, Muckleshoot Tribe, Karen Walter)

Response: "Habitat restoration work might be done," means that habitat restoration is not normally a maintenance activity. Stream or bank restoration is usually a construction project

⁸ Sutherland, R.C., and S.L. Jelen. 1996. Studies show Sweeping has Beneficial Impact on Stormwater Quality. APWA Reporter (November): 8-23.

with a Section 7 review. See page 1.68: *All exposed and unworked soils shall be stabilized by application of effective BMPs.*

Minimize disturbance to riparian vegetation:

- *Mark job site.*
- *Flag work area.*
- *Position equipment to protect riparian habitat.*

Restore vegetation appropriate for site conditions within riparian areas. Habitat restoration to be designed and constructed in accordance with applicable design and permits.

Monitor vegetation and stream habitat in accordance with permit requirements.

Maintenance Category # 7 – Gravel Shoulders

- 2.66 If the purpose of this activity is to have shoulders that filter sediments, etc, then shoulders should not be paved under Category #1. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The goal of road maintenance is to maintain existing gravel shoulders. However, if a safety issue arises or a resource agency requests that an existing gravel shoulder be paved, this will be done under this maintenance category. Gravel shoulders are a different type of ROW structure. Maintenance Category #1: Roadway Surface, page 1.46, "Maximizes opportunities for shoulder work, which will increase infiltration or biofiltration."

Maintenance Category # 9 – Bridge Maintenance

- 2.67 a) It is not clear how bridge activities limit the number of crossings through the habitat area. Some specific examples would be useful and a recognition that this statement is probably not accurate for watersheds with several jurisdictions in them. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Also, it is not apparent how this category will improve fish passage unless it is implying that bridges will be used in lieu of culverts. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Bridges concentrate utility (gas/water/electrical) crossings, pedestrian paths, bike paths, and vehicular traffic to one crossing rather than many crossings.

Response b: Bridges and culverts are types of a stream crossing. A conservation objective for bridge maintenance (page 1.82): "Modify artificial barriers that are not part of the structure to maintain or enhance fish habitat (HPA).

- 2.68 On page 1.80, there is no requirement that bridge activities adhere to a specific time frame for work within and near perennial waters. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Work within waters of the state requires HPAs, and work windows are a condition of the permit. Also, please refer to response to Comment [2.59](#).

- 2.69 On page 1.82, in the bridge maintenance table, the fourth sentence under conservation objectives achieved by states "in addition, it reduces structural damage to watercourses and stream systems". It is not clear what the word "it" is referring to and how the authors reached this conclusion. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Vehicles that leave the ROW structure can damage the stream, reducing accidents helps to reduce this type of damage. To clarify, the fourth sentence will be changed into a bullet under the third sentence.

- 2.70 Also on page 1.82, the next statement indicates that shade will be provided, which is not possible unless shade-producing vegetation is restored in riparian areas affected by bridge maintenance. An optional process, indicated on page 1.80 will not meet this objective. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See page 1.82, Conservation Objectives Achieved By "Providing shade along watercourses or streams by planting riparian area outside of bridge site (HPA, federal, state, or other regulations).

Maintenance Category #10 – Snow and Ice Control

- 2.71 On page 1.84, there is a conflict in the operational section of Snow and Ice Control descriptions. Removing sand from an area (item 2) and plowing snow in areas that allow vegetation to filter (item 3) are not the same activities. Therefore, it is not clear if sand will be removed from affected areas, or just plowed into others to allow for some filtering. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Some snow and ice operations do not require plowing, however sand removal will be given priority. Some snowfalls require plowing, and plows will try to move the snow to areas that allow filtering.

- 2.72 On page 1.85, the conservation objectives on this page are inconsistent. One describes removing sand, while two others discuss improving traction through the use of sand. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Improving traction reduces accidents and reduces the number of vehicles that leave the road structure. After the snow and ice event, removing sand from the roadway surface reduces potential sediment loading to waterbodies.

Maintenance Category #11 – Emergency Slide/Washout Repair

- 2.73 a) This entire category needs to be rewritten; it is too broad. As it reads now, any slide could be considered an emergency to all areas, not just those that threatens a roadway or capital improvement. (A-7, Muckleshoot Tribe, Karen Walter)
- b) There is no requirement to stabilize slide areas with vegetation; therefore, all slides may become a zone of riprap, without contributing towards properly functioning conditions. (A-7, Muckleshoot Tribe, Karen Walter)
- c) Any activity that is done to ‘prevent further damage’ to the environment should be reviewed by the Tribe and resource agencies prior to its commencement. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: We disagree. Page 1.86 BMP Outcomes, which are listed below, make it clear that emergency response work is limited to the Right of Way (ROW):

- *Control sediment and debris from ROW.*
- *Stabilize slide/washout area within the ROW to reduce environmental, transportation and/or structural impacts.*
- *Repair roadways, repair access roads, surface drainage, storm water system, and/or other ROW structures.*

Response b: Please refer to page 1.87, Site-specific Part 2 BMPs that references three (Filter/Perimeter Protection, Reduce Water Velocity/Erosive Forces, and/or Keep water from Work Area) of the eight site-specific Part 2 BMPs Outcome Categories. A total of 51 BMP options are recommended (See pages 2.10, 2.12, 2.14 or The BMP Outcomes Categories Matrix (pages 1.37 – 1.38, 2.18 – 2.19 and Appendix C). Vegetative BMPs include, but are not limited to: Back of Slope Planting, Large Woody Debris, Live Staking, Stream Bank Bioengineering. Rip Rap is one of the BMP options, however, page 2.101 under limitations states: This BMP should not be used in watercourses or streams:

- *Without permit review and approval.*
- *When maintenance activities could reduce actual or potential high flow salmonid refuge functions, this BMP will only be used if:*
 - *Required or allowed by permit conditions.*
 - *Required by other regulations.*

In addition, RCW 77.55.110 Hydraulic projects for irrigation, stock watering, or streambank stabilization – Plans and specifications – Approval – Emergencies and WAC 220-110-050 Bank protection establishes regulations, engineering standards, project review and conditioning of rip-rap through the HPAs.

Response c: Please see the response to Comments [1.10](#), and [1.13](#).

Maintenance Category # 13 – Sewer Systems

- 2.74 It is not clear why this category is included in a road maintenance program. It should be submitted under a separate sewer ESA compliance submittal that would take into account the entire sewage system. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to Figures 4, 5, 6, and 7 on pages xv and xvi. Utilities can be present as crossings within the right-of-way. WAC 468-34-340 (Preservation, restoration and cleanup of areas disturbed through utility installation, maintenance and repairs) outlines criteria for utility use of highway ROWs, and requires utilities to repair or replace unnecessarily removed or disfigured trees and shrub, and specifies vegetation management practices. Some agencies do all 15 categories of maintenance activities within their routine road ROW structure maintenance.

The Growth Management Act (GMA) requires a transportation element that includes systems, which transports goods, including water and waste.

Maintenance Category #14 – Water Systems

- 2.75 It is not clear why this category is included in a road maintenance program. It should be submitted under a separate water system ESA compliance submittal that would take into account the entire system. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see the response to Comment [2.74](#).

Maintenance Category #15 – Vegetation

- 2.76 There appears to be no differentiation of vegetation and maintenance goals between eastern and western Washington. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: That is correct, the goals are the same.

- 2.77 Selective removal and replacement of vegetation should be considered an applicable BMP. This would be preferable to wholesale removal and replacement of mature vegetation with young seedling or seed, as interim habitat could be provided during conversion of vegetation types. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Vegetation BMPs are included in the other 14 Maintenance Categories, under the Disturbed Areas subcategory of the BMP Tables. Categories #5 Watercourses and streams, #6 Stream Crossings and #9 Bridge Maintenance include the following vegetation BMPs, in addition to those in Maintenance Category #15 Vegetation:

Minimize disturbance to riparian vegetation:

- *Mark job site.*
- *Flag work area.*
- *Operate equipment to minimize damage to riparian habitat.*

Restore vegetation appropriate for site conditions within riparian areas.

Habitat restoration to be designed and constructed in accordance with applicable design and permits.

- 2.78 Include integrated pest management practices (IPM) approach as described in the Revised Code of Washington (RCW 17.15). (A-4, Grace Crunican, Director Seattle Transportation)

Response: IPM is not addressed in the RRMP. We agree that IPM is an important component of Vegetation Management. Although originally proposed as a Tri-County "plank," the services discontinued negotiation of the IPM plank, due to EPA jurisdiction over the chemical components. We did, however, develop an IPM that many jurisdictions have implemented (in a fashion tailored to their specific agencies.) The IPM adopted by Seattle and King County was based largely on the IPM developed by the Regional Forum. A Regional Forum IPM Subcommittee was active in the preparation of the Tri-County IPM proposal.

- 2.79 We have concerns regarding the vegetation free zone. This approach runs contrary to Seattle's urban forestry and sustainability policies. (A-4, Grace Crunican, Director Seattle Transportation).

Response: The City of Seattle representative appears to have misinterpreted the RRMP, and thought zone 1 was a requirement, rather than an option, depending on federal, state, and local safety standards. Page 1.102 of the RRMP states, "...not all zones are applicable to every ROW)." It is up to each jurisdiction to determine which zone is present or required within their own ROW. This issue has been clarified with the Regional Forum representative from the City of Seattle.

- 2.80 On page 1.103, the RRMP mentions that vegetation management in zone 2 should comply with regulations and standards without specifying what those regulations and standards are. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Some of the regulations are listed on page 1.102.

- 2.81 Even if zone 3 is an area with minimal maintenance, i.e. tree removal, pruning, herbicide application, etc., this is not a permanent condition and should count towards meeting properly functioning conditions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree, many ROW are never needed for expansion.

- 2.82 Also on page 1.104, the RRMP should discuss in detail how tree pruning and removal provides environmental benefits. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Pruning, if done properly, promotes healthy and structurally sound growth. The removal of less desirable trees improves the overall health of the surrounding plant community. The wood, wood chips, root balls and decaying logs provided biomaterials for regional fisheries enhancement groups, conservation districts and other restoration-oriented

organizations that are interested in biological materials. If left on site it provides structure and nutrients for microbiological organisms that are important to an aquatic ecosystem.

- 2.83 Some of the BMP outcomes listed on page 1.108, and other maintenance activities, appear unrelated to the definition of a BMP provided in the Glossary. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The list on page 1.108 provides the BMP outcomes, not the actual BMPs. These outcomes are the final results wanted to achieve through the use of BMPs.

- 2.84 a) On page 1.108, one of the BMP outcomes is reduction of blow down hazard. This may be important for road safety; however, there is no consideration that trees naturally blow down and sometimes this is the process by which trees end up in watercourses to create in-stream habitat. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Therefore, tree removal under this vegetation category should be re-examined and modified to ensure that the fewest number of trees are removed under this RRMP and for any that could provide habitat in a watercourse, then there should be mitigation for those removals. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: Dead, leaning, or structurally unsound trees that are hazardous and pose a threat to the traveling public are required to be removed, but, the way trees are disposed of can benefit the environment. If permits are given to place wood into watercourse in streams, or to lie along bank, or left on site within the boundaries of Zone 3, these options can be a benefit.

Response b: We do not agree. The removal of vegetation obstructions is required by RCW 47.32.130, Roadway Safety. Mitigation of impacts is provided by revegetation and making biomaterials available for restoration projects; provided that permits are issued.

Part 2 – Best Management Practices

- 2.85 On page 2.5, it should be noted in the RRMP that erosion processes could adversely affect aquatic life, including fish, not just habitat. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted.

- 2.86 On page 2.6, we agree that clearing existing vegetation will increase runoff velocities and volumes; therefore, the vegetation management category should be modified because it encourages vegetation removal. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The Vegetation category encourages the management of vegetation: from planting to removal. The environmental functions of this category include water quality preservation, protection and improvement; stormwater detention and retention; wetland and sensitive area protection; noxious weed control; noise control; habitat protection; habitat connectivity; air quality improvement; and erosion control.

- 2.87 On page 2.6, the RRMP should require that sediment traps and basin BMPs be installed before other land-disturbing activities; (A-7, Muckleshoot Tribe, Karen Walter)

*Response: Correct spelling errors in first and third headings. First heading add Sediment Traps to first sentence. Add "land-disturbing activities" to second sentence. Fourth heading, rewrite last sentence to, ~~Whenever possible, p~~Plan, **install** and ~~construct~~**use** sediment trap and basin BMPs before other land-disturbing activities (except in emergencies).*

- 2.88 The frequency of inspection and maintenance is important to successful BMPs; however, the RRMP offers no standard to ensure a set frequency. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The information is included in each BMP. (Example: Silt Fence: page 2.113) BMP Maintenance:

- Sediment should be removed when deposits reach one-half the height of the BMP.*

Removal:

- Remove sediment buildup in front of BMP.*
- Remove BMP (recycle and/or re-use if applicable).*

- 2.89 On pages 2.12 and 2.13, please define "fine-grained materials". (A-7, Muckleshoot Tribe, Karen Walter)

Response: We will rewrite sentence deleting "or for removal of high percentage of fine-grained material" and replacing with "not effective in "areas of" high flows.

- 2.90 On page 2.14, Reduce Water Velocity/Erosive Forces, under the limitations section, there is language that suggests that these BMPs should not be used if they reduce actual or potential high flow salmonid refuge functions. This is the first time that this issue is raised. It seems that this should also be discussed in Part 1 of the RRMP along with what it means and what should be done instead. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We believe the format is appropriate as written. However, this sentence will be added to the Introduction of the RRMP.

- 2.91 On page 2.16, Habitat Protection/maintenance, modify the term "large woody debris" to read "wood" because all sizes of wood should be available for habitat protection and none of it should be considered debris. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [2.58](#).

- 2.92 The BMP options should identify appropriately sized streambed gravel. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add gravel and streambed gravel to the glossary.

- 2.93 On page 2.21, there is a requirement that water discharged from a water barrier shall meet water quality temperature standards without specifying the standard. (A-7, Muckleshoot Tribe, Karen Walter)

Response: These will be permit requirements.

- 2.94 On page 2.23, there is a BMP for back of slope planting which will limit trees to 4 inches or smaller. There should be data to describe how often this BMP will be applied (i.e. the number and location of slope plantings) and the likelihood that this approach will provide any shade to watercourses. This data is necessary to determine if the BMP will cause water flow problems; there is no guidance. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Data similar to that requested here will be collected as required by permits and the monitoring and adaptive management elements of the RRMP.

- 2.95 On page 2.24, the maintenance standard for replanting is too vague and should be more specific. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The RRMP is a statewide program and back slope planting will depend on which side of the mountains, climate and location for the type of nursery stock or transplants that are used. Vegetation will be monitored for survival according to permit conditions, or when no permits are required until vegetation is established (see live staking BMP on pages 2.91 through 2.93).

- 2.96 On page 2.25, there should be timing restrictions put on cofferdams to protect salmonids of all life stages to the fullest extent possible (i.e. the most restrictive fish window). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Cofferdams are used in watercourses or streams according to permit conditions. Applicants must follow the location and timing restrictions contained in HPAs.

- 2.97 On page 2.33, the RRMP should be modified to require dewatering of construction areas where concrete containment will be performed. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This will be done according to permit conditions.

- 2.98 On page 2.36, add a bullet that describes how to properly dispose of concrete that is removed from a sump. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Part 1 BMP Material/Debris Disposal, page 1.91, "After repairs are completed, remove construction/maintenance waste materials from site for disposal or recycling."

- 2.99 a) On page 2.39, clarify that construction access roads should be temporary and require appropriate BMPs for their closure once construction is completed. (A-7, Muckleshoot Tribe, Karen Walter)
- b) Also on this page, the RRMP should require this BMP for erosion hazard sites, not just unstable soils. (A-7, Muckleshoot Tribe, Karen Walter)
- c) Finally, the RRMP is missing any requirements for the access road to provide adequate drainage: there should be cross-drains, etc. to direct road run off to vegetated areas to minimize the creation of unmanaged drainage networks. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: The BMPs for removal are on page 2.39.

Response b: See page 2.38, Constuction access roads may be installed at construction sites with unstable soils and/or steep slopes.

Response c: See page 2.40 for constuction access road detail. Drainage is a design element that is part of a plan. Add the following bullet in Construction Guidelines on page 2.38.

- *Drainage is designed to state and local design standards (See Sediment Ponds).*

- 2.100 On page 2.40, the washrack BMP is important and should not be an optional feature. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Agree. Drawing, delete optional.

- 2.101 On page 2.41, the continuous berm should not be allowed in intermittent streams and wetlands connected to surface waters. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Agree. Delete 'in perennial streams'.

- 2.102 On page 2.53, under construction guidelines for ditch lining, the application section should be re-written to make sure that this BMP is only used in areas that do not meet the definition of watercourses and streams under WAC 220-110-020 (41). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add Limitations Section on page 2.53. Delete last bullet in Construction Guidelines into Limitations.

- 2.103 "turbulent water" is not defined, (A-7, Muckleshoot Tribe, Karen Walter)

Response: The phrase "turbulent water" has been deleted.

- 2.104 Nor is there a limit on the amount/size of angular rock that can be used. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This is a design element and permit condition.

- 2.105 On page 2.64, the requirement to use filter fabric in accordance with permit requirements is too vague of a standard. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Local/State/and Federal permit conditions must be complied with and will define the use of BMPs.

- 2.106 On page 2.67, add a standard that requires mitigation for any wood that falls into the channel and poses a risk for public safety or structure damage. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [2.58](#).

- 2.107 On page 2.86, modify this entire page by using the term "wood" instead of "large woody debris", especially since large woody debris is not defined in the RRMP. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [2.58](#).

- 2.108 The application section indicates that there will be "desired engineering performance and desired habitat benefits" without defining either term. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Description, page 2.86 provides a list of Ecology, WDFW, and King County Bank Stabilization guidelines, site-specific design and permit condition.

- 2.109 See the figure on page 2.87 which is showing a piece of wood that is mostly out of the wetted area, thus limited in its functional value for habitat. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This photo is an example that was taken during construction.

- 2.110 please clarify the purpose of the second bullet under the limitations section. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The use of this BMP should be planned.

- 2.111 Finally, for any jurisdiction to get credit for restoration under this limit of the 4(d) rule, NOAA Fisheries should require that wood placement projects meet NOAA Fisheries definition of wood under the Matrix of Pathway and Indicators. NOAA Fisheries recently established this standard in its December 28, 2001 Biological Opinion for the 324 Acre Land Transfer and Proposed Land Uses Along the White River, Washington project (WSB-99-156; Corps #1997-4-01098 ATF). (A-7, Muckleshoot Tribe, Karen Walter)

Response: The Matrix of Pathways and Indicators was prepared for a specific habitat type and is not applicable for all project sites. Also, Local/State/and Federal permit conditions must be complied with and will define the use of BMP.

2.112 On page 2.92, the live staking BMP suggests that water may be necessary during the summer months without specifying where this water should come from. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Design/permit conditions must be complied with and will define the use of BMP.

2.113 On page 2.97, plastic covering should be used in any erosion hazard areas, not just steep slopes. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See Plastic Covering, page 2.97, Purpose:

- *Providing immediate temporary erosion protection to slopes, piles and disturbed areas that cannot be covered by mulching.*
- *Protecting exposed surfaces from water and/or wind erosion.*
- *Used in winter months as temporary erosive control device when grass seed will not germinate.*

2.114 On page 2.101, rip rap should not be used in areas where salmonids spawn or where there is a source of gravels/cobbles that can provide spawning habitat. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The use of riprap will be limited within watercourses and streams by permit review and approval. RCW 77.55.110 Hydraulic projects for irrigation, stock watering, or streambank stabilization – Plans and specifications – Approval – Emergencies and WAC 220-110-050 Bank protection establishes regulations, engineering standards, project review and conditioning of rip-rap through the HPAs.

In addition, other Local/State/and Federal permit conditions must be complied with and will define use of BMP.

2.115 On page 2.103, rock check dams should not be used in watercourses where they may interfere with up and downstream migration in all flow conditions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add the following bullet under Limitations:

- *When it affects fish passage.*

2.116 On page 2.117, please define the term "sufficient settling". (A-7, Muckleshoot Tribe, Karen Walter)

Response: See page 2.117, Construction Guidelines:

- *Water discharged from siltation pond/settling tank shall meet permit requirements at the point of discharge.*

Local/State/and Federal permit conditions must be complied with and will define the use of BMP.

2.117 The RRMP should require siltation ponds be designed to the most protective surface water design standard, (A-7, Muckleshoot Tribe, Karen Walter)

Response: See page 2.117, Construction Guidelines:

- *Silt ponds must be installed according to applicable permit requirements.*
- *Siltation pond should be designed according to surface water design standards.*

Local/State/and Federal permit conditions must be complied with and will define the use of BMP.

2.118 On page 2.128, straw bale barriers should be restricted to non-fish bearing waters; eliminate the third bullet under limitations. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The design/permit conditions will define the use of the BMP.

2.119 On page 2.133, straw bale barriers should be restricted to non-fish bearing waters; eliminate the third bullet under limitations. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see response to comment [2.118](#).

2.120 On page 2.139, the stream bank stabilization BMP encourages the use of any streambank guidelines instead of requiring the most protective guidelines be used. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The guidelines will be defined in the permit process; "conditions" will be part of the Local, State, and Federal permit process. Replace the last sentence in "Description" with the following: Will be determined through the permit process for maintenance work, however, this would normally be done as a Capitol Improvement Project (CIP).

2.121 On page 2.140, the stream bypass BMP, the RRMP is missing a requirement to ensure that stream bypasses do not entrain salmonids at pipes and pumps that may be used. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add bullet to page 2.140, BMP Maintenance:

- *Ensure that stream bypasses do not entrain salmonids at pipes and pumps that may be used.*

- 2.122 On page 2.144, add bridges to the streambed gravel BMP to be consistent with Part 2. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Agree. Add, "bridge maintenance" to description.

- 2.123 define the sizes for streambed gravel (A-7, Muckleshoot Tribe, Karen Walter)

Response: Streambed gravel size is determined through design/permit condition. Local/State/and Federal permit conditions must be complied with and will define the use of the BMP.

- 2.124 On page 2.150, add the word "properly" at the end of the last bullet under construction. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to Part 1: Maintenance Category BMPs "Material/Debris Disposal"

- 2.125 On page 2.153, it is unclear as to which BMP is used to trap sediment if the total contributing drainage area is more than 3 acres. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Page 2.153, add to Applications: "Drainage areas larger than three acres may use other BMPs such as Siltation Ponds, or Settling Tanks, as defined in applicable permit conditions."

- 2.126 On page 2.160, please define the term "significant body of water" under the limitations section. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Change to read: "Across the entire flow of the watercourse or stream".

- 2.127 On page 2.166, under limitations, please define: "potential for public safety hazard". Rework the second bullet; it is too broad and very subjective. (A-7, Muckleshoot Tribe, Karen Walter)

Response: First bullet under "Limitations", add –"according to the appropriate federal or state roadside safety standards." Modify the second bullet to state, "prohibits infiltration or reduces sheet flows."

Appendix E: Fish Exclusion Protocol

- 2.128 a) the fish exclusion protocol needs substantial changes prior to its approval by NOAA Fisheries. First, anyone using the protocol should be required to obtain a Section 10(a)(1) (A) Permit. This requirement would enable NOAA Fisheries (and others) to keep track of the level of take that may occur via fish exclusion activities. Without it, there is no way to keep track of take. (A-7, Muckleshoot Tribe, Karen Walter)

- b) Their needs to be a standard for fish exclusion efficiency and the success of fish exclusion should be tested. In some cases, gravel should be sampled for eggs, alevins, and fry. (A-7, Muckleshoot Tribe, Karen Walter)

Response a: See response to Comment [2.38](#). In addition, data is collected for research purposes (See Appendix E, page E.3, Information Logs). A condition of the WDFW special collection permit includes: "Due to the presence of threatened or endangered species, a valid permit from the NOAA Fisheries or USFWS may be required before sampling these waters. This permit (WDFW) will not be valid without any necessary federal permit(s) on site while collection activities are underway.

Add to the Guidelines: Any contact during fish exclusion activities with an ESA listed species will be documented and reported to USFWS or NOAA Fisheries. Specific information will include: Date of collection; city or county; Township, Section, Range; species; size; number of individuals; method of removal and disposition.

Response b: This is beyond the scope of the RRMP.

- 2.129 On page E.2 of the Exclusion protocol, it is not clear how waters that "do not contain ESA-listed fish" will be determined. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Waters that do not contain ESA-listed fish will be determined through previous fish presence surveys and areas where previous maintenance or other project work has been done where no listed fish have been found. Knowledge of state, federal, and local or tribal fish biologists may also be used to help determine waters that do not contain ESA-listed fish.

- 2.130 The training program should be modified to require periodic checks by fish biologists that can properly identify salmonids, require photos of random fish being sampled to verify identification, and evaluate trainees with non-listed coho before they use this method with Chinook. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This is a permit condition. Permits authorize personnel through qualifications and résumé's. Permits require environmental staff with expertise in fish removal and identification.

- 2.131 On page E.3, the protocols to classify fish by age class are incorrect. The size of 0+ fish will depend on the time of year and fish species. For example, in Lake Washington basin, 0+ coho, Chinook, and sockeye can reach 100mm in length by June (Eric Warner, pers. comm., 2002). It is better to estimate the mean length of the average fish of each size class. This can be done using MS on all caught fish, provided they are not stressed too much from capture. The data listed for field notes should be minimal requirement and not be optional as it is currently written. Injuries and mortalities should be reported for all fish caught, not just listed fish. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to comment [2.128a](#).

Although we agree that the relationship between the size of the fish and it's age differs, depending on site-specific and time-related variables, we do not agree with the use of MS 222 on fish that could be consumed by humans within a certain period after use. We believe that the length/age data obtained through the RRMP Fish Exclusion Protocol is sufficient.

- 2.132 On page E.4, the protocol should require regular checking of nets, not just waiting until leaves and debris are collected. By then, the fry will be dead. The nets should be checked more frequently if rain or leaf fall is possibility to avoid fry mortality. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We agree. Add language to the Fish Exclusion Protocol: Block nets should be checked regularly for proper performance.

- 2.133 Also on page E.4, the protocol proposes to use a modified method based in part on a protocol used by the Tribe. The Tribe does not have a set protocol for seining; rather the Tribal Fisheries Department used a particular method for research in the Duwamish River (i.e. Warner and Fritz, 1995). This method may not be appropriate for all areas and should not be cited as the basis for the fish exclusion protocol method. The two methods have little in common (Warner, pers. comm. 2002). (A-7, Muckleshoot Tribe, Karen Walter)

Response: We agree. This citation will be removed from the Fish Exclusion Protocol.

- 2.134 On page E.5, the protocol electrofishing guidelines are not adequate and it is not apparent how they were derived. Also, there are no maps to determine what are anadromous waters and resident waters. Chinook fry will be rearing until at least mid-May in some watersheds. Coho will be in several areas all year. Sockeye fry will migrate into April as fry. Chum will migrate as fry as late as May/June. Steelhead may not spawn until after March 1; the earlier spawners will have eggs in the gravel. (Warner, pers.Comm.. 2002). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Refer to the Citations and Other References section: The protocol was derived from NOAA Fisheries, 2000 Guidelines for Electrofishing waters Containing Salmonids Listed Under the Endangered Species Act. As stated in the protocol, dates were recommended by NOAA Fisheries, USFWS and WDFW. Timing and presence of anadromous fish are issues in need of continuing study. Site-specific modifications will be made to the protocol as additional information is gathered through the adaptive management process.

- 2.135 Also on page E.5, the conductivity settings on shocking should be revised every 10 minutes in areas where conductivity can be increased by kicking up mud, et. (A-7, Muckleshoot Tribe, Karen Walter)

Response: In areas where excessive sediment may be disturbed, conductivity should be checked periodically. Conductivity readings will dictate the settings for optimal electrofishing performance.

WDFW collection permits require certain conductivity settings based on site and project conditions. Modifications to the conductivity settings to compensate for high turbidity have been allowed under WDFW collection permits. Monitoring will detect harm to fish that may occur as a result of electroshocking. Modifications to WDFW collection permit program or to activity-specific WACs to prevent future harm will occur, but outside the RRMP.

- 2.136 On page E.7, it is important to test the success of fish exclusion techniques for areas that will be dewatered. One way to do this is to set the electroshocker to "fry" and see if anything was missed. Gravel should also be sampled for eggs, alevins, and fry. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The Fish Exclusion Protocol has guidelines that state the following item should be followed:

"No electrofishing in anadromous waters from October 15th to March 1st. No electrofishing in resident waters from November 1st to May 15th. In order to avoid contact with spawning adults or active redds, environmental staff must conduct a careful visual survey of the area to be sampled before beginning electrofishing. Electrofishing will only be conducted at other times of the year in response to emergency activities. Electrofishing at other times of the year may require mitigation. Specific mitigation requirements recommended by the NOAA Fisheries, USFWS, and WDFW will be followed."

Do not electrofish when redds or alevins are present, except if an emergency warrants it.

- 2.137 Also on page E.7, there need to be standards on the screen size used for pumps and the bucket slots. The screen standards should follow WDFWs guidelines for velocity and mesh size. The pump hose outlet should be checked periodically for signs of fish and invertebrates. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The protocol requires block nets up and downstream of pump operations. Fish are excluded out of the work area prior to maintenance activities and during dewatering operations. Slotted buckets and pump nets are additional precautions. There is no need for application of the NOAA fish screen criteria in this case.

Part 3 Application for Individual Agency

- 2.138 There should be more detailed information regarding the Project Selection Process. Selection of the type of maintenance activities to be performed is itself a BMP, and may preclude the need for application of BMPs. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The checklists were developed for the selection of activities.

3.0 Biological Review of the Regional Road Maintenance ESA Program Guidelines

General Comments

- 3.1 In general, the Biological Review relies on compilation documents, which may or may not cite the original source documents correctly. Furthermore, some documents used are out of date and do not reflect the best available science. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The preparation of the BR was conducted in accordance with the format recommended by the 4(d) Rule Implementation Binder for Threatened Salmon and Steelhead on the West Coast, September 22, 2000 and is consistent with recently completed Biological Opinions in NOAA Fisheries' Northwest Region. The BR was based on information compiled in recent documents and the Washington State Conservation Commission Habitat Limiting Factors reports. The science is getting better with the passage of time and this is why adaptive management is one of the 10 Program Elements.

- 3.2 The objectives of the Biological Review (BR) to provide a basis for NOAA Fisheries' biological evaluation of the RRMP is laudable. However, the BR is limited and inadequate to determine whether or not the RRMP meets the PFC objective. For example, the BR relies on global information regarding the status of the species based on previous listing decisions. Additional information is available for specific populations that will be affected by this program particularly on the individual jurisdiction scale (i.e. watersheds). This information was not considered in the BR making it a clumsy tool to use. Similarly the life history data in Section 3.2 is so broad and its run timing tables are without citations that it makes any analysis difficult at best. A final example is the single paragraph without substance and citations for the "Factors of Decline" for Puget Sound Chinook on page 39. This BR should have a lengthy discussion about the contribution of roads and road maintenance activities to the factors of decline, which likely vary in scale, frequency, etc. by watershed. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. See response to Comments [3.1](#), and [3.21](#).

- 3.3 The BR lacks any discussion about having some jurisdictions follow the RRMP and others doing something else. Based on Part 3, it appears that several jurisdictions are not applying for Limit 10 at this time; therefore, all of the WRIAs in the Tribe's U&A are lacking complete coverage under the RRMP at this time. The BR should analyze this outcome. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Focus is on the worksite and not WRIA.

1.0 Summary

1.2 Background

- 3.4 On page 10, in the background section towards the bottom of the page, the BR notes that Puget Sound area tribes "provided input and assistance in the development of the Guidelines". This statement is inappropriate because it fails to note specifically which tribes participated, how they participated, and how their comments were used in the final version of the document. The Muckleshoot Indian Tribe may have participated early on in the process; however, we did not participate in the drafting of the final RRMP nor the BR. Please note this in the updated version of both documents. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to page [27](#) of the response to comments for public involvement activities. The BR reflects the public involvement activities that have taken place throughout the development process of the RRMP.

- 3.5 On page 10, the BR noted that Limit 10 is limited to routine road maintenance activities, begging the question as to why water and sewer are part of the RRMP. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to the response to Comment [2.74](#).

1.3 Purpose

- 3.6 Page 11 – there is uncertainty regarding the actual risks associated with performing the maintenance activities and applying the BMPs, as the desired conservation outcomes may not be achieved. This plan relies heavily on training, adaptive management and monitoring, which must be adequately implemented to ensure the desired outcomes are achieved. It would be helpful to identify and anticipate these risks, especially during the initial application of the RRMP. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. Maintenance activities without BMPs may have associated uncertainties. We recognized the possibility that desired conservation outcomes might not be achieved. To minimize this risk, the RRMP includes a reporting requirement. NOAA Fisheries will have opportunities to review the implementation of the program and to make recommendations for its improvement in meeting the desired conservation outcomes.

- 3.7 The definition of maintenance activities provided on page 12 of the Biological Review is different than that provided on page 1.67 of the RRMP. (A-3, Perry J. Harvester, WDFW, Habitat Biologist).

Response: As noted above, this error will be fixed.

- 3.8 Page 12 – If replacement of structures is defined as maintenance in the RRMP, any new environmental standards, as well as engineering standards, should apply. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Please see page x, Definition of Road Maintenance, which states:

Maintenance: Repair and maintenance include activities that:

- (a) are conducted on currently serviceable structures, facilities and equipment and*
- (b) involve no expansion of or change in use of such structures, facilities, and equipment beyond those that existed previously; and*
- (c) do not result in significant negative hydrological impact.*

Repair and maintenance include those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems or to replace dysfunctional facilities. Repair and maintenance also include replacing existing structures with different types of structures.

***PROVIDED THAT replacement is required to meet current engineering standards or by one or more environmental permits and the functioning characteristics of the original structure are not changed.** An example would be replacing a collapsed, fish-blocking round or wooden culvert with a new box culvert under the same span or width of roadway.*

When either standard (environmental or engineering) determines that replacement requires the original structure to change or be relocated, this is beyond the scope of maintenance and the activity will be forwarded to the Capital Improvement Program.

- 3.9 At the bottom of page 12, the BR notes that the program does not apply to the portion of Part 1 of the RRMP identifying "installation" of facilities as one of the activities. If installation does not apply to either new construction or major expansion, then it should be defined as such in the RRMP. Otherwise, the BR is incorrect on this page and should provide an analysis of these potential new impacts. See also page 15, under Section 2.2 for similar inconsistencies. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. Given the definition of road maintenance, it is clear that "installation" refers to existing right of way structures and not to new facilities. Please refer to the response to Comment [2.4a](#). An example of installation includes but is not limited to: roadside signs, guideposts, raised pavement markers, and guardrails. Installation of road signs and guideposts involve minor amounts of excavation.

2.0 Description of Action: The Regional Program

2.2 Maintenance and Repair Activities

2.2.3 Maintenance Categories

- 3.10 Most of the categories in this section (pages 20-27) have the potential to cause site specific and cumulative adverse impacts, yet none of the categories are proposing any mitigation. This is a problem with the RRMP itself. The BR fails to recognize this issue, thus fails to analyze the effects of such a proposal. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. For mitigation, please refer to the response to Comment [2.4b](#).

"Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" is a requirement of the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and the Hydraulic Code. In addition, any project authorized by a Nationwide Corps permit is required to be properly maintained to ensure public safety⁹. Therefore, road maintenance of the ROW and built structures are a part of the mitigation package associated with the construction of the roadway system and is not subject to additional compensatory mitigation."

2.2.3.5 Category 6 – Stream Crossings

- 3.11 On page 23, the BR notes six "habitat goals" for stream crossings. There are two problems with these goals. First, there is no goal for ensuring that the stream crossing does not interfere with habitat forming processes (i.e. movement of wood, water, and sediment). (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The enactment of RCW 75.20.100-160 was recognition by the state Legislature that virtually any construction, within waters of the State, has the potential to cause habitat damage. It was also an expression of a state policy to preclude that possibility from occurring. The law's purpose is to see that needed construction is done in a manner to prevent damage to the state's fish, shellfish, and their habitat. By applying for and following the provisions of the HPA issued under RCW 75.20.100-160, most construction activities around water can be allowed with little or no adverse impact on fish or shellfish.

- 3.12 Also on page 23, the BR notes that habitat restoration work may be part of road maintenance or not. It is not if these activities are covered under this Limit 10 submittal or not. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [2.58](#) regarding changes in the RRMP on Large Woody Material (LWM). It will also depend on the scope of the habitat restoration work, and whether or not it is associated with the maintenance work activities. An example related to stream crossing maintenance would be the placement of streambed substrate and wood directly related to removal, replacement, or modification of stream crossings.

2.2.3.12 Category 13 – Sewer Systems & 2.2.3.13 Category 14 – Water System

- 3.13 On pages 25 and 26, please eliminate sewer and water systems from the BR (and the RRMP); they are not appropriate for the Limit 10 of the July 2000 version of the 4(d) rule. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see the response to Comment [2.74](#).

3.0 Species Information

3.2 Life Histories and Biological Requirements

⁹ See Nationwide Permit General Condition 2. Proper Maintenance.

3.2.1 Chinook Salmon (*Oncorhynchus tshawytscha*)

- 3.14 On page 34, the BR notes that stream-type and ocean-type juveniles can be produced by any of the Chinook races. The basis for this statement is a phone call to a WDFW Biologist (John Sneva). If this statement is accurate, it should be based on data and/or a WDFW report. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted.

3.2.1.1 Puget Sound Chinook Salmon

- 3.15 There is a mistake on page 36. The authors cite the SASSI document as WDFW 1994 when it should be WDF et al. 1993. (A-7, Muckleshoot Tribe, Karen Walter)

Response: As noted above, this error will be fixed.

- 3.16 Pages 37-39 are all missing the source for the Tables 2a, 2b, and 2c. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted.

- 3.17 On page 39, the BR should cite the federal register where NOAA Fisheries designated critical habitat. Also in this paragraph the rule exempts "Indian lands" not "tribal lands" as noted in the BR. Indian lands are defined in the rule, not tribal lands. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Federal registers which cite NOAA Fisheries designated critical habitat can be found in Table 1, Species Status Reference List, and pages 31 – 33. We agree to replace "tribal lands" with "Indian lands".

3.2.5 Bull Trout

- 3.18 If the RRMP isn't seeking coverage for bull trout (see page 9 of the BR), then it is unclear why there is any discussion about bull trout. Furthermore, for the information that is provided in this section, it is lacking citations for the majority of its statements. Finally, Table 16 does not identify all segments of listed bull trout (see <http://www.rl.fws.gov/news/bulltrout/btspt99.jpg>). The information in Table 16 is not cited. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The explanation for why bull trout is included can be found in a footnote on page 33. The comment regarding the lack of citations is too vague, and we are unable to give a specific answer to any point you may be referring to. The listed web site was not accessible and comment noted regarding Table 16.

However, it should be noted that Table 16 wasn't intended to show all 34 subpopulations in the Coastal-Puget Sound Population Segment. Table 16 is intended to show the complexity of the

anadromous life form (see page 63, third paragraph in Life History). Any future document will include the upper Puyallup River Basin and the lower Puyallup (which includes the Carbon River and White River).

4.0 Baseline Habitat data

- 3.19 The first paragraph implies that all treaty tribes worked with the Washington State Conservation Commission to develop limiting factors reports. This is not entirely accurate for the Muckleshoot Indian Tribe. We provided some information and assistance to the Conservation Commission for some of the WRIAs in the Tribe's U&A; however, our involvement was limited and we are not responsible for the information in those reports. Nor are we responsible for information in any limiting factors reports that were completed by the Conservation Commission and individual WRIA groups (i.e. WRIAs 8 and 9). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted.

4.2 Findings on Salmonid Habitat in Washington State

- 3.20 On page 79, the BR purports that the RRMP supports habitat protection and restoration strategies by "developing BMPs that avoid and minimize impacts to aquatic habitats due to routine road maintenance activities". The BR fails to provide any data or analysis to support this statement. There is no discussion about the specific limiting factors attributable to roads and road maintenance activities and how the RRMP will be addressing those. Without a detailed analysis by watershed, this statement is nothing more than an objective of the program. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree, as noted in the response to Comments [2.20](#), [1.6](#) and [3.21](#). The analysis assumed salmonid species are likely to be present in the system thus providing the greatest protection.

5.0 Effects of the Action

5.1 Criteria for this Biological Review

- 3.21 Page 81 – It is our opinion that the application of some of the BMPs, especially those associated with work in watercourses, may preclude attainment of PFC and long term survival of listed salmonids. Applying repetitive maintenance activities would likely preclude natural progression towards PFC, especially for projects located within a floodplain or watercourse. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. The RRMP is for the maintenance of existing roads, water and sewer systems within the right of way. The RRMP does not include the potential impacts associated with the road itself or development and redevelopment of the infrastructure. NOAA Fisheries developed a series of broad ecological goals for conservation and recovery of the species (NOAA 1996). The intent of these goals was to define and describe the ecological processes and functions necessary to support viable populations of salmonid species over long time

periods. These goals serve as the focal point for the Biological Review of the RRMP for ESA compliance under the 4(d) rule. Therefore, it is desirable to develop programs and BMPs that move towards achievement of these goals, or at least do not contribute to further degradation of the processes and functions described. Improvement to road maintenance programs and practices can be expected to lead to incremental improvements relative to the goals. The adaptive management process will identify activities, repetitive or otherwise, that impair habitat. It will also be used to modify the RRMP to ensure it preserves existing habitat function levels and allows natural progression towards PFC where habitat is impaired.

5.2 Context of this Biological Review

- 3.22 On page 82, the RP notes, "the contribution of historic and present road maintenance practices is minimal relative to the many other land-use practices that have shaped the present environmental baseline." The identified list of potential effects of road maintenance activities is significantly understated and unsupported by data or analysis in the BR. Again, without a detailed discussion of specific to roads and road maintenance, this statement cannot be made. Furthermore, if historic and present road maintenance practices are minimal relative to other land use practices, then the BR should provide the analysis to support this contention. It may or may not be true in specific watersheds and to specific life history stages of specific salmonid populations. (A-3, Perry J. Harvester, WDFW, Habitat Biologist and A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. This section of the BR is setting the ecological context, relationships, and implications for management. The ecological contexts are based on data/information from the following documents:

- *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale, NOAA Fisheries 1996*
- *ManTech Report (Spence et al. 1996)*
- *Changing Our Water Ways: Trends in Washington's Water Systems, DNR 2000*
- *Extinction is Not an Option: Statewide Strategy to Recovery Salmon, Governor's Salmon Recovery Office November 1999*

References are cited on pages 81 through 83.

- 3.23 Finally, the BR fails to note that the existence and use of roads can cause adverse impacts to instream habitat forming processes that involve the recruitment and transport of wood. Roads also have a cumulative effect by fragmenting habitat (May et al. 1997). Roads also contribute to degraded water quality and adverse impacts to aquatic life by providing a direct source of pollutants (Spence et al. 1996, May et al. 1997 etc.). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Comment noted. The analysis of effects is located in Chapter 6. The RRMP is for the maintenance of existing roads, water and sewer systems within the right of way. The

RRMP does not include the potential impacts associated with the road itself or development and redevelopment of the infrastructure.

5.3 Factors Affecting Habitat

- 3.24 The long term risks to ESA listed species associated with implementation of the BMPs is absent from the review. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comment [3.23](#).

- 3.25 Page 83 – We strongly disagree with the statement that, "The contribution of historic and current road maintenance practices is minimal relative to the many other land use practices that have shaped the environmental baseline". While the statement may be valid on a statewide scale, there are many specific examples where chronic maintenance activities, including activities, which perpetually maintain poorly designed structures, have had significant impacts to certain watercourses. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

5.3.1 Road Maintenance Practices

- 3.26 Again there is no data or analysis to support the statements in the first paragraph on page 84. The second paragraph fails to note that several BMPs are not 100% effective to reduce sediment and/or pollutant inputs. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see response to Comments [3.21](#) and [3.23](#). Making decisions with incomplete information involves a process of continued examination and reexamination of observations, inferences drawn from observations, tests of hypotheses, and a search for generalizations. This is why the RRMP contains 10 Program Elements, including adaptive management: the process of continually learning from one's mistakes and experimenting to learn, while at the same time making decisions based on the best available scientific data (see Section 6.4.4 for discussion on adaptive management).

5.3.2 Altered Hydrology

- 3.27 On page 85 (and elsewhere), the BR cites a document, CRITFC 1994, but failed to include it in Section 8.0, Literature Cited. Furthermore, the BR attributes several statements regarding information from Puget Sound to this document, which is unlikely since CRITFC operates in the Columbia River basin, not Puget Sound. It appears that the authors meant to use May et al. (1997) for the citations on Puget Sound. (A-7, Muckleshoot Tribe, Karen Walter)

Response: As noted above, this error will be fixed. References are cited on page 83 in footnote 8. All citations of CRITFC 94 within 5.3.2 Factors Affecting Habitat will be deleted.

5.3.3 Fish Barriers

- 3.28 Again, the second paragraph that provides barrier information is accredited to the CRITFC 1994 document, which is incorrect. The citations should be from the annual joint WDFW and WSDOT reports to the Legislature and included the most recent report. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [3.27](#).

5.3.4 Water Quality

- 3.29 The information regarding waterbodies not meeting Washington water quality standards should be attributed to the Department of Ecology, not CRITFC 1994. Furthermore, there should be an analysis of these waterbodies compared against roads that will be covered under the RRMP to determine which roads and which BMPs may affect current water quality conditions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comments [3.21](#) and [3.27](#). The overarching goal of the BR is to provide a conceptual approach for answering road maintenance management questions regarding salmon conservation. The BR establishes the utility of BMPs, training, monitoring, scientific research, and adaptive management. The decision to take an action to enhance or conserve salmon is ultimately a societal decision. Divergent groups within a society will continue to debate what policies to adopt and what is desirable to monitor. This BR does not enter into this debate, however societal decision-making can be enhanced by scientific processes and by understanding what contributions science can make. This BR explains the RRMP, the basic scientific research concepts, and principles of monitoring, which can be considered once the decision is made to take one or more actions intended to benefit salmon.

3.3.5 Habitat

- 3.30 Page 87 – Cumulative factors impacting habitat and associated with perpetual road maintenance activities should be addressed in this section. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: The cumulative factors are discussed on page 84, Section 5.3.1. Road Maintenance Practices.

- 3.31 It seems unlikely that CRITFC 1994 is the basis for the statement regarding the loss of pools in National Forests or the state of habitat on federal lands on page 87. Also, please substitute the term "LWD" with the word "wood". (A-7, Muckleshoot Tribe, Karen Walter)

Response: See response to Comment [3.27](#). Regarding LWD please refer to the response to Comment [2.58](#).

- 3.32 Page 88 is missing citations to support any of the data this quoted on this page. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Referenced citations can be found on page 83.

5.3.6 Harvest

- 3.33 This section should be removed; it is not relevant to the RRMP for Limit 10. Furthermore, it is clearly not written by someone who knows harvest data and current harvest rates. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. This section is relevant.

5.3.6 Hatcheries

- 3.34 Again, remove this section; it is not relevant to the RRMP proposed for Limit 10 of the 4(d) rule. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. This section is relevant.

5.3.9 Regulatory Factories

- 3.35 The first paragraph in this section states, "The existing regulatory framework and implementing agencies may be unable to protect salmon populations and their ecosystems". The word "may" should be replaced with "are". NOAA Fisheries concluded this in the final 4(d) rule (Fed. Reg. 42422). (A-7, Muckleshoot Tribe, Karen Walter)

Response: Replace "may" with "are".

6.0 Analysis of Effects

- 3.36 Page 92 – We disagree with the statement that, "..... Road maintenance impacts to habitat are a relatively small factor..." There is significant evidence and testimony by state and federal biologists, which would refute this claim. The effects of cumulative road maintenance, and replacement of water crossing structures, can be significant. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Comment noted.

- 3.37 There is no data or analysis to support the statement that "road maintenance is a form of mitigation for the original construction of the roadway". Road maintenance activities often cause adverse impacts themselves and sometimes occur without mitigation. There is nothing in the RRMP or the BR to suggest that the Regional Program can contribute significantly to PFC for aquatic species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree; please see response to Comment [2.4a](#).

"Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" is a requirement of the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and the Hydraulic Code. In addition, any project authorized by a Nationwide Corps permit is required to be properly maintained to ensure public safety¹⁰. Therefore, road maintenance of the ROW and built structures are a part of the mitigation package associated with the construction of the roadway system and is not subject to additional compensatory mitigation.

Chapter 77.55 WAC code requires prior to work approval to be obtained from the director of the Department of Fisheries or Department of Game. 220-110-010 WAC establishes regulations, project review and conditioning of HPAs.

We believe that the ten-element RRMP preserves existing habitat function levels, at the ESU scale, and allows natural progression towards PFC where habitat is impaired.

3.1 Road Maintenance

- 3.38 Page 92 – We maintain that, in some instances, there are viable alternatives to road maintenance activities, which can lead to preventing the need for future or repetitive maintenance activities. The RRMP should provide incentives to relocate or redesign structures, which have significant adverse impacts on listed fish. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Road relocations are beyond the scope of the RRMP. For additional information regarding chronic maintenance problems see response to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

- 3.39 On page 92, at the bottom, the BR describes how enclosed drainage systems contribute to conservation; however, this bullet (as well as the section on enclosed drainage systems in the RRMP) fails to note that by controlling volumes and velocities there is a corresponding increase in flow duration that may cause adverse impacts to aquatic life. Please see the 1998 King County Surface Water Design Manual. (A-7, Muckleshoot Tribe, Karen Walter)

Response: NPDES permits and the design standards from the Department of Ecology's Western Washington Stormwater manual will be implemented, when required.

6.2 Conservation Outcomes of the Regional Program

6.2.3 Blockage Removal

- 3.40 On page 94, the BR identifies "debris" that should be removed to restore passage. Please delete this term and replace it with the word "trash". If the intent was to be able to remove wood (being called debris here), then there will be a problem because

¹⁰ See Nationwide Permit General Condition 2. Proper Maintenance.

removing wood in lieu of relocating it will cause adverse impacts without mitigation. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please see the response to Comment [2.58](#). Wood will be relocated back into a watercourse if the permit authorizes the placement.

- 3.41 On page 94 – It is always preferable to relocate the debris rather than to remove it, to ensure PFC is maintained. The RRMP should be revised to use the term relocation rather than removal of LWD. In addition, debris jams should only be removed within the appropriate Work Window for the specific stream. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Please see the response to Comment [2.58](#).

- 3.42 Also on this page, the BR mentions a 1999 MOA between the Services and WDFW. Our review of this MOA indicates that it is an interim document; therefore, it is not appropriate to use it as the basis of providing standards for blockage removal. Furthermore, this MOA has never been discussed with the Muckleshoot Indian Tribe to determine if the MOA will be sufficient for treaty-protected resources or not. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Although the MOA has expired, an HPA continues to be required for the removal of blockages in watercourses and streams. It is important to note that standards are not static. As science advances through time, standards will change. The Muckleshoot Indian Tribe review of the MOA and any future document is beyond the scope of the RRMP.

6.2.4 Restoration of Flow Velocities/Volumes

- 3.43 Any BMP that restores flow/velocities/volumes should be done with the goal of meeting the needs of aquatic life, not just aquatic habitat. The assumption that protecting stream channels from erosion is sufficient to protect aquatic life is not correct (see May et al, 1997). Furthermore, the RRMP does not identify specific standards to meet this objective; therefore, it is doubtful that it will be achieved. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Add aquatic "life" and habitat. The standards will be determined through design/permit condition. Local/State/and Federal permit conditions must be complied with and will define the use of BMPs.

Risk analysis applied to salmon populations is a rapidly developing area of scientific inquiry, and currently there are no widely accepted standards. In 1999, the Governor's Salmon Recovery Office commissioned WDFW and WSDOT to develop technical assistance guidance for those who want to protect and restore salmonid habitat. The scope of this program has been expanded to include the promotion, protection, and restoration of fully functioning marine, freshwater, and riparian habitat through comprehensive and effective management of activities affecting Washington's aquatic and riparian ecosystems. Participation in the project

has also expanded to include the Corps and USFWS to the list of contributing agencies. Guidance includes:

Existing Draft Guidelines:

- *Fishways – Design, Operation, and Evaluation*
- *Fish Passage at Culverts*
- *Fish Protection Screens*
- *Streambank Protection*

Guidelines Under Development:

- *Stream Habitat Restoration*

Proposed Guidelines:

- *Freshwater Sand and Gravel Removal*
- *Freshwater On and Over water Structures*
- *Lakeshore Protection*
- *Marine Nearshore and Estuary Restoration*
- *Marine Dredging*
- *Marine On and Over water Structures*

The above Guidelines are only mentioned to point out that standards are changing. This process of change is adaptive management.

6.2.5 Removal of Fish Passage Barriers

- 3.44 There is nothing in the RRMP that provides a commitment to remove fish passage barriers. Furthermore, there is not real analysis about the extent of the problem and the timeframe when these barriers will be removed. Without this information, one cannot complete an analysis of this BMP to provide conservation for the species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This is beyond the scope of the Guidelines. Maintenance work is performed to care for and maintain roads and associated features so they substantially retain their original intended use and function. If a road or associated facility needs to be redesigned and replaced prior to its life expectancy the work is turned over to the Construction Program and becomes a Capital Project.

In addition, the MOA between WDFW and WSDOT concerning the Construction of Projects in State Waters (June 2002), establishes procedures to ensure that state transportation projects protect fish life and habitats. This includes physical surveys of publicly owned facilities by WDFW to identify fish passage and other fish and wildlife habitat problems. This work is on going and is being done by the Construction Program as capital projects.

6.2.6 Revegetation

- 3.45 There is no data or analysis to support the contention that the revegetation BMPs will increase shading and reduce water temperatures. (A-7, Muckleshoot Tribe, Karen Walter)

Response: This is correct. They are outcomes of the BMPs. If monitoring indicates that outcomes are not being met, then the BMPs will be adjusted to improve the outcomes. Data collected through the monitoring of BMP effectiveness will accumulate gradually. This information, along with research, will determine the effectiveness of these BMPs.

Any research conducted on the effectiveness of revegetation BMPs on reducing water temperatures will need to be done over time. As the records lengthen from single data points to decadal-scale time series, they will become interpretable through increasingly formalized statistical methods. The short-term interpretation has been conducted with the assistance of expert opinion, taking into account: (1) The effects of BMP outcomes (which is unstudied and transient) on salmon habitat and numbers (e.g., temperature reduction through shading); (2) Fluctuations in other variables affecting salmon populations (e.g., stream flow, ocean conditions, and hatchery releases); and (3) Time scales of some effects that are several years (salmon life history) to several decades (re-establishment of trees within riparian area).

3.2.9 Addressing Chronic Maintenance Problems

- 3.46 Page 96 – There is no corresponding protocol within the RRMP to address the number of chronic maintenance problems that contribute to habitat degradation. This section within the RRMP needs to be expanded to define how chronic maintenance projects are identified and break the cycle of repeated application of maintenance activities. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

- 3.47 The commitment to refer chronic maintenance problems to capital improvement programs does nothing to provide any assurance that these problems will be fixed in a timely manner. (A-7, Muckleshoot Tribe, Karen Walter)

Response: See responses to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

6.3 Regional Program BMPs

6.3.1 Outcome – Based BMPs

- 3.48 Page 97 – Many potential risks and negative impacts associated with the identified maintenance activities are not identified in the Biological Review or the RRMP. We disagree with the statement, "Positive conservation outcomes far outweigh negative impacts", since the negative impacts are not adequately identified, especially the long term and chronic negative impacts. Monitoring maintenance activities will determine if these goals are actually achieved. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Risks and potential negative impacts are discussed in section 6.5 Adverse Effects, pages 116 through 132 as it relates to maintaining existing road ROW structures. Additional comments are noted. The RRMP is for the maintenance of existing roads, water and sewer

systems within the ROW. This does not include the potential impacts associated with the road itself or development or redevelopment of the infrastructure.

6.3.2 Permit Compliance as BMPs

- 3.49 Page 97 & 100 – The conditions under which an HPA is required are inaccurate. The working of RCW 77.55.100 should be provided to describe when and where HPAs are required. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comment [2.3b](#).

6.3.3 Effects Analysis

- 3.50 Continued constraining of channel migration zones (CMZs) is not even considered in the Effects Analysis section (page 97), or anywhere in the habitat goal BMPs. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: Environmental retrofit projects are not covered by the RRMP. They are outside the scope of the maintenance definition. However, the RRMP has provisions for identifying this chronic maintenance problem and for providing this information to agency watershed planning, regulatory agencies and/or Capital Improvement Programs (CIP).

Also, please refer to the response to Comment [3.21](#).

- 3.51 It does not appear that any evaluation has been conducted on the impacts to the attainment and persistence of properly functioning conditions, including: 1) constrained channel migration; 2) lost riparian recruitment due to riparian encroachments and vegetative management in stream-adjacent roads; 3) stream channel crossings, including routine clearing of LWD from the upstream side; and 4) direct habitat alterations including LWD removal. Prior to issuance of a take exemption, NOAA Fisheries must determine the cumulative effects of these "routine" actions on the attainment and persistence of PFCs including LWD and pools. (A-5, Nooksack Indian Tribe Natural Resources Department Director, Robert Kelly)

Response: Comment noted. Also, see response to Comment [1.6](#), and [3.21](#).

- 3.52 While the BR may assume that salmonids are present in any watercourse covered by the RRMP, the RRMP does not make the same assumption. Therefore, there is no basis for this assumption in the BR. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The training curriculum teaches the maintenance crews to always assume salmonid species are present in the system, and to contact environmental support staff and WDFW Area Habitat Biologists. Please refer to pages 1.41, 2.7 and Appendix D of the Guidelines (Checklist #1). The steps are sequential. Steps 1 through 6 must be completed prior to proceeding to steps 7 and 8. Maintenance crews are required to contact environmental staff and WDFW prior to selecting BMPs.

3.3.4 Assessment Documents

- 3.53 On page 100, it is unclear how a HPA will change a situation from a "likely to degrade baseline indicator" to "not likely to adversely affect". Furthermore, there is no data to support this concept. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to the response to Comment [3.11](#).

- 3.54 On page 101, the BR fails to note that ditch cleaning of potential salmonid bearing waters done as road maintenance will not have short-term impacts. Furthermore, impacts within one season (which could be viewed as short term) may affect an entire year class of salmonids within the affected waterbody. Hardly a minimal impact to the listed species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to the response to Comment [2.27](#).

6.3.5 Results of BMP Analysis

- 3.55 There is no data to support the conclusion shown in Figure 7, therefore, it is impossible to analyze whether the predicted outcome of the RRMP will occur. (A-7, Muckleshoot Tribe, Karen Walter)

Response: Please refer to the response to Comments [2.5a](#), and [2.6](#).

- 3.56 Table 24, Page 106 – This table appears to be overly optimistic in presenting the benefits of applying the RRMP guidelines to maintenance activities. Simple variables such the timing of the project, or weather conditions, can significantly alter the values within the table. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. See response to Comment [1.6](#).

6.5 Adverse Effects

- 3.57 This entire section is just a re-iteration of previous sections and does not provide any analysis of adverse effects or how the BMPs will mitigate for these effects with data to support conclusions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. The BMPs and subsequent conservation measures are identified, in matrix form, in Table 25, which is located on pages 107 through 108. The Mechanism of Effects and Potential Outcomes are identified, in matrix form, in Table 26. Activities and Effects, with the Guidelines Implemented are identified, in matrix form, in Table 24. All of these tables are also located in Appendix B.

Section 6.5 provides a detailed description of how the RRMP avoids and minimizes impacts of those activities that have the potential to degrade the baseline indicators that are shown in Table 24.

6.5.3 Earth Surface and Cleaning Work

- 3.58 Risks associated with "Shore Defense Work" are understated. Maintenance activities, such as armoring a road prism, may preclude long-term recovery to PFC for listed species. The BMPs listed in this section are not likely to mitigate the risks to listed species. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. Immediate repairs involve stabilizing the area. The actual repairs will be determined through the permit process and will normally be done as a Capital Improvement Project (CIP). Language has been added to the BMP: Stream Bank Stabilization (Bio-Engineering) to clarify this.

Chapter 77.55 WAC code requires prior to work approval to be obtained from director of the Department of Fisheries or Department of Game. 220-110-010 WAC establishes regulations, project review and conditioning of HPAs.

6.5.4 Classification: Hydraulic Modification

- 3.59 Channelization and ditching of natural or altered watercourses should not be considered a routine road maintenance activity and we recommend that it be dropped from consideration as part of the RRMP. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. As discussed in the BR, proper maintenance of roadways and drainage features to limit erosion and sediment transport helps maintain and restore natural watershed processes that create habitat characteristics favorable to salmonid species. This requires management of the timing, volume, rate, and character of sediment and bedload input, transfer and storage. Work under this maintenance category must be done under permits. The permits will condition the use of BMPs so impacts are avoided or minimized.

- 3.60 Page 123 – Increasing conveyance rates in storm water systems will not likely result in beneficial improvements to PFC. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Increasing conveyance rates in storm water systems are beyond the scope of the RRMP. The RRMP and associated BMPs are limited to activities associated with road maintenance on existing infrastructure, as defined by the maintenance definition in the RRMP. If existing stormwater facilities are not properly maintained, they can become a source of pollutants during large storms, as accumulated sediment and debris are washed downstream. This is why they are cleaned of accumulated sediment. Cleaning conveyance systems to their original design standard does not increase their conveyance rates above the design capacity.

6.5.5 Hydraulic Modification

- 3.61 Page 124 – There are few, if any, instances in which large woody debris would actually create a threat to fish habitat. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Comment noted. This sentence will be deleted.

- 3.62 LWD should be relocated from bridge abutments and culverts, but it should not be removed from the stream. Most streams are deficient in desired LWD loading. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to comment [2.58](#).

6.6 Beneficial Effects

- 3.63 This section attempts to identify the benefits of various BMPs; however, there is no commitment to do the activities in this section and there is no data or analysis to support the conclusions. (A-7, Muckleshoot Tribe, Karen Walter)

Response: The commitment is the Part 3 Applications. Also, the RRMP specifically requires compliance with regulations and permits. Permit requirements frequently accomplish habitat improvements.

RRMP had two routes to qualify for the limit. The first is provided in section 10 (i) of the 4(d) Rule and is based on an RRMP being substantially similar to the ODOT guide and meeting or exceeding its protection. This analysis was conducted and a draft report submitted to the Tri-County Road Maintenance Technical Working Group by URS on December 20, 2000. In this report a literature search was conducted and summarized on BMP effectiveness. However, the findings showed there is little definitive data regarding BMPs effectiveness. The BMPs are derived from good engineering judgment, experience, and common sense. The URS report concluded that the RRMP exceeded the ODOT standard in terms of the level of specificity provided, more detailed provisions for monitoring and evaluation, and more frequent reporting of research findings and program evaluations to state and federal resources agencies to ensure compliance. The RRMP also exceeded the ODOT Guide by setting a bi-annual timeframe for program and BMP review and revision, versus a five-year interval, and by indicating that road maintenance procedures and Capital Improvement Projects will include habitat rehabilitation where possible. In general, the level of detail provided in the BMP section meets or exceeds the ODOT Program.

Under section 10(ii), the second option for analyzing the RRMP looks at the ability of the RRMP to meet the ecological goals of the ESA. This is the option chosen by NOAA Fisheries for this Program. The results of this later evaluation are presented in the BR. The RRMP submittal package also contained all seven submittal elements that were contained in the "4(d) Rule Implementation Binder for Threatened Salmon and Steelhead on the West Coast", NOAA Fisheries, September 22, 2000.

Both analyses concluded that the scientific research supporting the effectiveness of programs and BMPs is limited. Nevertheless, the set of BMPs in the RRMP meet or exceed the standards

set by NOAA Fisheries for 4(d) rule compliance. This conclusion is based upon a judgment-based comparison of the level of specificity regarding the planning and implementation of BMPs, the causes of adverse impacts associated with the maintenance activities, and the desired outcome of proper BMP use. To assure this, the provisions for monitoring and evaluating BMP effectiveness, integrated with scientific research, training and adaptive management are consistent with achievement of the stated ecological goals of the ESA.

6.6.3 Maintenance Categories: Watercourses and Streams, Stream Crossings, and Bridge Maintenance

- 3.64 "Routine" bridge maintenance is conducted where existing bridges are inadequate for the circumstances. Bridge scour solutions do not address the root of the problem, which is the severely constrained channel due to an inadequate bridge width. To better address the transportation needs and attainment of PFCs, an appropriately sized bridge that does not strain and restrict LWD recovery in the main stem Nooksack River is recommended. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: Bridge relocations/replacements are not maintenance activities. Therefore, they are beyond the scope of the RRMP. For additional information regarding chronic maintenance problems see response to Comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

- 3.65 NOAA Fisheries must make a determination of how crossing structures, and the maintenance associated with them (including cutting LWD) cumulatively affect the attainment of PFCs in downstream reaches, including mainstem rivers, prior to issuance of any exemption for this. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: See response to Comments [1.6](#), and [3.21](#).

Chapter 77.55 WAC code requires prior to work approval to be obtained from director of the Department of Fisheries or Department of Game. 220-110-010 WAC establishes regulations, project review and conditioning of HPAs. Specifically 220-110-150 establishes the conditions in which large woody material removal or repositioning work must be done.

6.6.7 Maintenance Category: Emergency Slide/Washout Repair

- 3.66 We do not believe that the proposed measure (pg 131) of referring chronic maintenance and habitat problems to agency specific CIP offers any assurance toward achieving PFCs. We need assurances of implementation, not just referrals that offer no assurances of implementation. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: See response to Comment [2.5a](#), and [3.21](#).

- 3.67 "Emergency Slide/Washout Repairs" are due to lateral channel migration into road toe slopes, where the existing road or bridge has constricted channel movement. Instead of assessing and restoring CMZs, and the habitat forming processes created by channel movements, the proposed slide or washout repairs include measures including "armoring with toe rock". Armoring with rock should explicitly be excluded from any exemptions from take, as this is not supported by the best available science. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: We disagree. Immediate repairs involve stabilizing the area. The actual repairs will be determined through the permit process and will normally be done as a Capital Improvement Project (CIP). The permits will condition the use of BMPs so impacts are avoided or minimized. Language has been added to BMP: Stream Bank Stabilization (Bio-Engineering) to clarify this.

Chapter 77.55 WAC code requires prior to work approval to be obtained from director of the Department of Fisheries or Department of Game. 220-110-010 WAC establishes regulations, project review and conditioning of HPAs.

7.0 Conclusion on Conservation

- 3.68 Based on all the previous comments, it is impossible to conclude that the RMP will conserve the listed species. (A-7, Muckleshoot Tribe, Karen Walter)

Response: We disagree. All elements identified on page 10-5 of the 4(d) Implementation Binder for Threatened and Steelhead on the West Coast (NOAA Fisheries 2000) are included in the submittal package. We have spent over 3 years working closely with NOAA Fisheries and USFWS in developing the RRMP to ensure that salmon and bull trout are conserved. This close coordination with NOAA Fisheries was intended to ensure that the program, as submitted, would likely be approved. We believe that the program does qualify and the Biological Review is scientifically credible and supports the conclusion.

- 3.69 Page 133 – There appears to be some risk that PFC may not be achieved or maintained through application of the RRMP in some instances, especially with regard to maintenance of structures in, or along, watercourses. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. See response to Comments [1.6](#), and [3.21](#).

- 3.70 It is our position that not all of the potential negative affects to habitat resulting from maintenance activities can be mitigated, or offset, through application of the BMPs identified. Most of the BMPs are focused on mitigating the short term affects of project construction activities, and not on mitigating the longer-term impacts. There is risk that mitigation of cumulative affects, and maintenance associated with replacement of water crossing structures, will not occur. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: Monitoring, data collection, scientific research and adaptive management will determine the need for additional mitigation, if necessary, to meet the conservation goals of the RRMP. Also, see response to Comments [2.4a](#), and [b](#); and [3.21](#).

- 3.71 Page 134 – (Paragraph 1) The language of RCW 77.55.100 should be used for determining when HPA's are required; the statement in this paragraph is incorrect. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to Comment [2.3b](#).

- 3.72 HPA's include provisions for the protection of fish life. Not all adverse impacts to fish and fish habitat associated with a maintenance activity can be mitigated through a HPA. Many impacts associated with upland maintenance activities are outside the scope of Hydraulic Code jurisdiction, and therefore must be addressed in the RRMP. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We agree. The RRMP provides a program that avoids or minimizes many adverse impacts from road maintenance activities where permit coverage is not provided. That being said, improvement in road maintenance programs and practices can be expected to lead to incremental improvement relative to the broad ecological goals for conservation and recovery of the species (NOAA 1996).

- 3.73 Page 135 – Element 4 – There is need for more detailed information within the RRMP to better define success in the application of BMPs. After the biological baselines are delineated, long-term monitoring may be necessary with some types of maintenance activities and BMP's, to ensure that PFC is actually maintained or achieved. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to comment [2.14a](#) through [e](#).

- 3.74 Page 136 – There is no data to support statements associated with figure 7. There are likely instances in which not applying maintenance activities and BMPs would accelerate recovery towards PFC. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to comments [2.6](#), and [3.21](#).

Additional Notes

- 3.75 There appears to be less emphasis on monitoring, adaptive management, and conservation outcomes, than on the completion of maintenance activities. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: We disagree. See response to comments [1.5](#), and [2.14a](#) through [e](#). The Part 3 Application is completed by each jurisdiction seeking a take limit. The Part 3 Application is the jurisdiction's commitment to implement the 10 program elements of the RRMP.

- 3.76 Lack of funding commitments. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to comments [1.2](#) and [1.5](#).

- 3.77 More incentive to do a project over, rather than properly diagnosing and correcting the problem. (A-3, Perry J. Harvester, WDFW, Habitat Biologist)

Response: See response to comments [1.4](#), [2.5a](#), [2.9](#), and [3.21](#).

- 3.78 Replacement of water crossing structures doesn't appear to fit within the definition of maintenance. The BMPs are focused on mitigating the short term impacts resulting from various construction activities and don't address the potential long-term impacts to fluvial geomorphology, which can occur well outside the right-of-way of a road.

Response: See response to comments [2.4a](#), [2.5a](#), [2.18e](#), [3.21](#), and [3.50](#).

- 3.79 The discretionary elements left vague in this Plan, such as in-channel LWD removal, are likely to be invoked to save costs and avoid permits, to the detriment of listed and Treaty-protected salmonids and to the attainment of PFCs to recover them. Proposed actions need to be evaluated site specifically, with external review, to best accomplish the desired outcome, while not impeding salmon recovery. (A5-5, Robert Kelly, Nooksack Indian Tribe Natural Resources Department Director)

Response: We agree. See sample checklists in Part 1, pages 1.41 through 1.44; Part 2, pages 2.7 through 2.9; and Appendix D. The steps are sequential. Steps 1 through 6 must be completed prior to proceeding to steps 7 and 8. Maintenance crews are required to contact environmental staff and WDFW prior to selecting BMPs. Performing the work comes later after permits are acquired. Also, Local/State and Federal permit conditions must be complied with and will define the use of BMPs.

- 3.80 In 1998, the Washington Department of Transportation completed a SEPA checklist for a project to use Polyacrylamides (PAM) for Soil Erosion Control and Flocculation of Stormwater. According to WAC 173-270-303(6)(d), Puget Sound Highway Runoff Program, WSDOT is required to share the results of the experimental BMPs with affected tribes, local governments, or property owners prior to Ecology's authorization expire. We have not seen the results of this experimental BMP and it would be interesting to know if it was effective or not. WSDOT intended to evaluate this BMP for at least one year and possible up to four. Furthermore, there should be some data and reports available that determine the effectiveness of road BMPs in conjunction with NPDES permits. This data should be analyzed in a revised BR. (A-7, Muckleshoot Tribe, Karen Walter)

Response: WSDOT Maintenance and Operation Program will forward the above request to the WSDOT Environmental Affairs office. In addition, please refer to the response to Comment [3.63](#) regarding review of BMP effectiveness. Once the RRPM is approved a subcommittee will be established regarding research that will review these reports.

Appendix A: Tri-County Salmon Conservation Coalition Executive Committee List

Billy Frank, Jr. Northwest Indian Fisheries Commission 6730 Martin Way E. Olympia, WA 98516	Sam Anderson, Executive Director Master Builders of King & Snohomish County 2155 112 th N.E. Bellevue, WA 98004	Thomas A. Waite, Counsel, Office of the General Counsel The Boeing Company P.O. 3707 Seattle, WA 98124-2207
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The Honorable Larry Phillips Metropolitan King County Council 516 Third Avenue Seattle, WA 98104	The Honorable Ron Sims King County Executive 516 Third Avenue, Room 400 Seattle, WA 98104	Maryanne Tagney-Jones Washington Conservation Voters 2021 3rd Ave. Seattle, WA 98121
The Honorable Barbara Skinner, Mayor, City of Sumner 1104 Maple Street Sumner, WA 98390	The Honorable Karen Biskey Pierce County Council 930 Tacoma Avenue S., Room 1046 Tacoma, WA 98402	The Honorable Ted Bottiger Port of Tacoma P.O. Box 1837 Tacoma, WA 98401
Lucy Cerqui Cerqui Farms 7824 Valley Ave. E. Fife, WA 98424	The Honorable Bill Baarsma, Mayor City of Tacoma 747 Market Street, Room 1200 Tacoma WA	Bernalyn McGaughey, President Compliance Services International 1112 Alexander Avenue Tacoma WA 98466
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Ty Waude 505 Cedar Avenue, Suite B-1 Marysville, WA 98270	Sue Adams Pilchuck Audubon Society 2829 Rockerfeller Avenue Everett, WA 98201	The Honorable Edward D. Hansen, Mayor City of Everett 3002 Wetmore Avenue Everett, WA 98201
Kim Levesque Snohomish Conservation District 528 91st Avenue NE, Suite C Everett, WA 98205-1535	The Honorable David Weiser, Mayor City of Marysville 4822 Grove Marysville, WA 98270	The Honorable John Mohr Port of Everett P.O. Box 538 Everett, WA 98206
The Honorable John Koster Snohomish County Council 3000 Rockefeller Ave MS: 609 Everett, WA 98201	Terry R. Williams Tulalip Tribes 7615 Totem Beach Road Marysville, WA 98271	Jeffrey Richey Dept of Fisheries University of Washington Seattle, WA 98195-1210
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Appendix B: Tri-County Salmon Conservation General Assembly Mailing List

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Ty Waude Belmark Industries, Inc. 505 Cedar Avenue, Suite B-1 Marysville, WA 98270	Sue Adams Pilchuck Audubon Society 2829 Rockefeller Avenue Everett, WA 98201	Lucy Cerqui Cerqui Farms 7824 Valley Avenue East Fife, WA 98424
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The Honorable NormaJean Dierck Marysville City Councilmember 4822 Grove Street Marysville, WA 98270	The Honorable Rick Larsen Snohomish County Council 3000 Rockefeller Avenue Everett, WA 98201	The Honorable Tina Roberts Mayor, City of Lynnwood 19100 44th Avenue West P.O. Box 5008 Lynnwood, WA 98406-5008
The Honorable Jan Stafford Covington Water Commissioner 31915 162nd Pl. SE Auburn, WA 98092	The Honorable Kathy Vaughn Snohomish County PUD Box 1107 Everett, WA 98206-1107	The Honorable Dave Weiser Mayor, City of Marysville 4822 Grove Street Marysville, WA 98270
The Honorable Margaret Pageler Chair, Utilities & Environmental Management Committee Seattle City Council 600 Fourth Avenue, 11th Floor Seattle, WA 98104	Don Berkey Snohomish County PUD Box 1107 Everett, WA 98206-1107	Tom Fitzsimmons Director, Department of Ecology 300 Desmond Dr. P.O. Box 47600 Olympia, WA 98504-0900
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The Honorable Ken Goodwin P.O. Box 2612 Woodinville, WA 98072	The Honorable Margaret Pageler Councilmember, City of Seattle 1200 Municipal Building 600 4 th Avenue Seattle, WA 98104	The Honorable Joe Brennan SeaTac City Councilmember 17900 International Boulevard, Suite 401 SeaTac, WA 98188
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The Honorable Ken Hansen Tribal Council Chair Samish Tribe P.O. Box 217 Anacortes, WA 98221	The Honorables Don Hopkins, Phil Bannen, Jim Schaffer Port Commission, Port of Everett P.O. Box 538 Everett, WA 98206	The Honorable Sherie Johnny Tribal Council Chair Nooksack Tribe P.O. Box 157 Deming, WA 98244-0157
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The Honorable David M. Viafore President, Pierce Co. Cities & Towns Assoc. City of Fircrest 115 Ramsdell St. Fircrest, WA 98466	The Honorable Donna Wright, President Snohomish Cities & Towns Assoc. City of Marysville 4822 Grove Street Marysville, WA 98270	The Honorable Merle Hayes Vice Chair, Suquamish Tribe P.O. Box 498 Suquamish, WA 98392-0498

The Honorable Kathy Vaughn Snohomish County PUD Box 1107 Everett, WA 98206-1107	Councilmember Pat Hawkins Town of Clyde Hill 2659 - 90th Ave. NE Clyde Hill, WA 98004	Peter Orser, Sr. Vice President Quadrant Corp. Quadrant Plaza NE 8 th at 112 th , Suite 500 PO Box 130 Bellevue, WA 98009
The Honorable Bill Sterud Tribal Council Chair Puyallup Tribe 2002 E. 28th St. Tacoma, WA 98404-4949	The Honorable Bill Baarsma Mayor, City of Tacoma Tacoma Municipal Bldg. 747 Market Street, Room 1200 Tacoma, WA 98402	The Honorable Ken Martin Mayor, City of Puyallup Puyallup City Hall 218 West Pioneer Puyallup, WA 98047
The Honorable Ted Bottiger Commissioner, Port of Tacoma P.O. Box 1837 Tacoma, WA 98401	The Honorable John Koster Snohomish County Councilmember 3000 Rockefeller Avenue, MS: 609 Everett, WA 98201	The Honorable Bob Drewel Snohomish County Executive 3000 Rockefeller Avenue, MS: 407 Everett, WA 98201
Terry R. Williams Director, Natural Resources Dept. Tulalip Tribes 7615 Totem Beach Road Marysville, WA 98271	The Honorable Matt McCune City of Stanwood 10220 270th St. NW Stanwood, WA 98292	Billy Frank Jr., Chairman Northwest Indian Fisheries Commission 6730 Martin Way E. Olympia, WA 98516
The Honorable Charles Mosher City of Bellevue Council P.O. Box 90012 Bellevue, WA 98009-9012	The Honorable Walter Canter WA Assoc. of Sewer & Water Districts 14417 SE 169th St. Renton, WA 98058	

Appendix C: List of Contacts for Information and Assistance

Contacts for Information and Assistance

Agency	Last Name	First Name	Subcommittee	Title	Phone #	E-mail Address
San Bernardino	Thompson	John		Manager	(925) 433-7400	john.thompson@sanber.org
	Cunningham	John		Public Works Liaison & Assistant City Manager	(925) 855-1913	john.cunningham@sanber.org
	Coake	Charles		Public Works Superintendent	(925) 855-1000	charles.coake@sanber.org
	Thiel	Chick				chick.thiel@sanber.org
	Wardell	Ben			(925) 855-0900	ben.wardell@sanber.org
	Dick's	Debbie		Maintenance Supervisor	(925) 545-9200	debbie.dicks@sanber.org
	Marcink	Arthur		Public Works Director	(925) 545-1000	arthur.marcink@sanber.org
	Mullown	Edward		Surface Water Coordinator	(925) 545-1000	edward.mullown@sanber.org
	Schneid	James		Operations Manager	(925) 545-1000	james.schneid@sanber.org
San Joaquin County	Andrews	John		Senior Environmental Coordinator	(925) 855-7524	john.andrews@sanber.org
	Kenneth	Donna	TR, SW	Grainage/Water Quality Lead Worker	(925) 855-7524	
	Swaff	Roy	TR, TR, SW	PA Operations Coordinator	(925) 855-7524	roy.swaff@sanber.org
Fresno	Hanson	Huay	TR	Asst. Mgr. Public Works	(925) 555-5201	hanson@sanber.org
	Wardell	John		Manager, Dept. of Roads & Transportation Services	(925) 776-4070	john.wardell@sanber.org
Trumbull County	Cooper	Gary		Public Works Superintendent	(925) 450-6400	gary.cooper@sanber.org
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	Hopewell	Alan		Environmental Engineer	(925) 776-7500	alan.hopewell@sanber.org
	Al	Al		CSC Highway & Local Programs, Operations Engineer	(925) 776-7500	al.al@sanber.org
	Sandra	Sandra	TR, TR, TR, SW	Water Quality Policy Manager	(925) 776-7500	sandra.sandra@sanber.org
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The tables below show the current Regional Forum Subcommittee (as of this publication).						
Program Review Subcommittee						
Call and visit the subcommittee for general information regarding the Regional Program, or for assistance in applying for a job under the Regional Program.						
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	Harris	Roy		Maintenance & Operations Supervisor	(925) 355-4100	roy.harris@sanber.org
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	Hopewell	Alan		Environmental Engineer	(925) 355-4100	alan.hopewell@sanber.org
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	Al	Al		CSC Highway & Local Programs, Operations Engineer	(925) 355-4100	al.al@sanber.org
	Al	Al		PA, General Manager	(925) 355-4100	al.al@sanber.org
	Al	Al		Asst. General Manager	(925) 355-4100	al.al@sanber.org
	Al	Al		Asst. General Manager	(925) 355-4100	al.al@sanber.org
Biological Review Subcommittee						
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	Dean	Gary		Maintenance & Operations Supervisor	(925) 355-4100	gary.dean@sanber.org
	Hanson	Huay		Asst. Mgr. Public Works	(925) 355-4100	hanson@sanber.org
	Hopewell	Alan		Environmental Engineer	(925) 355-4100	alan.hopewell@sanber.org
	Adams	Al		Asst. Mgr.	(925) 355-4100	al.adams@sanber.org
	Al	Al		CSC Highway & Local Programs, Operations Engineer	(925) 355-4100	al.al@sanber.org
	Al	Al		PA, General Manager	(925) 355-4100	al.al@sanber.org
	Al	Al		Asst. General Manager	(925) 355-4100	al.al@sanber.org
	Al	Al		Asst. General Manager	(925) 355-4100	

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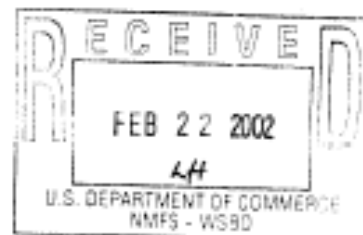
Contacts for Information and Assistance

Agency	Last Name	First Name	Subcommittee	Title	Phone #	E-mail Address
Training Subcommittee						
Chair	Hearts	Ray		Maintenance & Operations Supervisor	(200) 204-4000	Ray.R@wccnet.wa.gov
Co-Chair	Schmidtback	John		Wastewater Plant Program Supervisor	(200) 204-4000	John.S@wccnet.wa.gov
Members	Brown	Kathy		Asst. Operations Manager	(200) 204-4000	Kathy.Brown@wccnet.wa.gov
	Chen	Denise		Maintenance & Operations Supervisor	(200) 204-4000	denise.chen@wccnet.wa.gov
	Johnson	Jarvis		Manager	(200) 204-4000	jarvis.johnson@wccnet.wa.gov
	Konoshita	Denise		Drinking Water Quality Lead Worker	(200) 204-4000	Denise.Konoshita@wccnet.wa.gov
	Schmidtback	John		Wastewater Plant Program Supervisor	(200) 204-4000	John.S@wccnet.wa.gov
	Stephens	Barbara		Water Quality Policy Manager	(200) 204-4000	Barbara.Stephens@wccnet.wa.gov
	Wolf	Ray		Asst. Operations Supervisor	(200) 204-4000	Ray.Wolf@wccnet.wa.gov
Stormwater Subcommittee						
Chair	Brown	Kathy		Asst. Operations Manager	(200) 204-4000	Kathy.Brown@wccnet.wa.gov
Co-Chair	Hearts	Ray		Maintenance & Operations Supervisor	(200) 204-4000	Ray.R@wccnet.wa.gov
Members	Archer	Jennifer		Stormwater Manager, Public Works	(200) 204-4000	jennifer.archer@wccnet.wa.gov
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Colors are the same
Primary green means
Bioscience group & member
Blue means
General member for
OTM Update

Appendix D: Written Comments (Copies of letters)

Martin P. Hayes
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Indianola, WA 98342
(360) 297-4712



National Marine Fisheries Service
Attention: Laura Hamilton
510 Desmond Drive SE
Suite 103
Lacey, WA 98503

February 21, 2002

Public Comment of Martin P. Hayes, RE: Draft RMP, Federal Register,
January 25, 2002, Page 3688-3689: Regional Road Maintenance ESA
Guidelines, Washington State.

I wish to comment on the following section summary from the above
referenced Federal Register listing: "The RMP defines what activities are
routine road maintenance. These consist of maintenance activities that are
conducted on currently serviceable structures, facilities, and equipment,
involve no expansion of or change in use, and do not result in significant
negative hydrological impact."

My comments are relative specifically to the Application of Kitsap
County, to receive a take limit from NMFS under the 4 (d) rule of the
Endangered Species Act (ESA), but should be applied more broadly.
It should be noted that Kitsap County's application is more than 3 times the
length of any other of the 23 local agencies seeking exemption.

First, let me make clear I fully support the principle of exempting **routine**
road maintenance, as described in the Federal Register listing quoted above,
but concerns are raised regarding the potential for abuse and manipulation.

In the case of Kitsap County, I am currently involved in an appeal of a
countywide sewage treatment plant, proposing a new sewage conveyance
system across a Class I estuary, in a 100-year flood plain, that is in a
conservancy Shorelines status, and further delineated as a sensitive
environmental area. This area will never be subjected to any environmental
review, because it has been embedded in a "routine" road maintenance
project. The position of Kitsap County, is that a sewage conveyance system

is merely "reviewed" for its metallurgical content, not for its use as a utility. No Shorelines permit is in evidence, no SEPA review is in evidence; the BA (biological assessment) excluded this portion of the sewage plant project from review. So the federal role has been short-circuited. The need for an EIS, required under NEPA (for a pipeline corridor), has been equally ignored. Kitsap County insists that creation of a new sewage system in a previously unsewered area is merely routine road maintenance within its existing right-of-way, and that the profound negative hydrological impact of sewerage an entire county (Kitsap County is 80% dependent upon groundwater recharge), has no relevance. In my experience, Kitsap County (and potentially other jurisdictions) are highly adept at manipulating the public permitting process, while federal agencies are totally dependent upon the good will and intentions of local jurisdictions.

The question and challenge is, what safeguards can NMFS create to insure that ex post facto, applications will not be significantly altered, after approvals are given, so that the federal government and its agencies believe one project is being permitted, when in fact a hugely different project is actually being constructed—in this case prior to any public hearing, or granting of any mandatory local, state, or federal licenses and permits? Do you see my concern here? By granting a take limit under the 4 (d) rule, the NMFS and other federal agencies become the de facto "legal guardians" of potentially unlawful conduct. The NMFS gets a starring role in the melodrama, "How the NMFS was Had." I've seen Kitsap County successfully toying with and manipulating federal authority, by endlessly moving the pea, if you will, much like a cat with a mouse. The county would now become "citizen-proof," as well; as NMFS makes potential ESA citizen challenges "ESA-proof."

I don't have any answers for you, as I am out of my league here. I can only honestly explain the pitfalls of your proposal, and hope you will act in good faith to protect the public interest. If in fact one of your dual roles is, "...contributing to the conservation of ESA listed species...", then you must find a way to avoid sewage treatment plants, or other profound environmental impacts, from being hidden within routine road maintenance projects. Thank you for considering my public comment.

Martin P. Hayes
Martin P. Hayes

Hans Kwast
Director



Department of Public Works

350 N. Market Boulevard
Chehalis, WA 98532
(360) 740-1123
Fax: (360) 740-1479
TDD: (360) 740-1480

February 25, 2002

Laura Hamilton
National Marine Fisheries Service
510 Desmond Drive, Suite 103
Lacey, WA 98503



RE: Federal Register Notice, Joint Routine Road Maintenance Program under ESA

Dear Ms. Hamilton:

This letter provides comment on the federal register notice of January 24, 2002, pertaining to the Routine Road Maintenance Program jointly submitted by several Puget Sound Counties in Washington and by a number of cities, aimed at protecting salmon listed under the Endangered Species Act. My comments are directed in two areas; 1) to compliment the considerable efforts of Ms. Kathy Brown of the King County Department of Transportation, and others, in preparing the Routine Road Maintenance Program, and 2) to request that National Marine Fisheries Service, while validating the Routine Road Maintenance Program, refrain from considering it the statewide standard.

I am aware that considerable effort went into the preparation of the Routine Road Maintenance Program. It involved countless meetings, numerous intense discussions, and new levels of dialog between road maintenance personnel and fisheries professionals. The outcome has been a well accepted program for road maintenance that can put into practice some good tools to protect salmon and their habitat in the urban Puget Sound counties.

What concerns me now is previous correspondence from Mr. Steve Landino of National Marine Fisheries Service, indicating the Routine Road Maintenance Program will be the yardstick to which other submittals may be compared. A distinction should be made between what is considered affordable and appropriate best management practices in the wealthiest and most densely populated part of the State of Washington, and what is affordable and appropriate in the least wealthy and less densely populated parts of the State. There is no argument that salmon and their habitat must be protected, only a different perspective on what is a realistic and achievable expectation for best management practices. Smaller, more rural counties may wish to borrow heavily from not only the previously accepted document, but also from the Oregon Department of Transportation's Maintenance Management System and from the Routine Road Maintenance Program from the Puget Sound Counties. There should be an expectation that our best management practices can be tailored to not only be effective, but also affordable, and acceptable from the viewpoint of the local constituency.

February 25, 2002
Ms. Laura Hamilton, page 2

Transportation funding is in crisis in this state, and I consider it doubtful the taxpayers will tolerate any perceived largess in our road maintenance practices. Therefore I urge you, please exercise appropriate discretion in your consideration of alternate road maintenance programs, and place due consideration on cost effectiveness of the road maintenance dollars that will be expended toward recovery of salmon and steelhead in the Pacific Northwest.

Sincerely,



Pete Ringer, P.E.
County Engineer

PR/ks:lkr

cc: U.S. Senator Patty Murray
U.S. Senator Maria Cantwell
Congressman Brian Baird
Governor Gary Locke
State Senator Joseph Zarelli
State Senator Dan Swecker
State Representative Thomas Mielke
State Representative John Pennington
State Representative Richard DeBolt
State Representative Gary Alexander
Board of County Commissioners
Connie Robins, County Administrator
Hans Kwast, Public Works Director
Kathy Brown, King County Department of Transportation

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State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Region 3 Office: 1701 South 24th Street - Yakima, Washington 98902-5720 • (509) 575-2740

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February 22, 2002

National Marine Fisheries Service
Habitat Conservation Division
ATTENTION: Laura Hamilton
510 Desmond Drive, Suite 103
Lace, WA 98503

Dear Ms. Hamilton:

SUBJECT: Comments on submission of a Routine Road Maintenance Program pursuant to protective regulations promulgated under the Endangered Species Act (4-d Rule Application).

The Washington Department of Fish and Wildlife (routine) has reviewed the above-referenced document posted on January 23, 2002, on the Federal Register, and offers the following comments.

We are supportive with development of the Routine Road Maintenance Program in that it provides a forum for sharing information regarding Best Management Practices(BMP's) Available Science, and development of techniques and standards for implementing a variety of construction techniques. The Routine Road Maintenance Program provides a means by which BMP's mitigating maintenance activities can be implemented and refined through adaptive management.

We are concerned that implementation of some of the BMP's and other elements of the Routine Road Maintenance Program may contribute to long term habitat loss and preclude attainment of Proper Functioning Condition (PFC), as there is little discussion regarding how **chronic maintenance impacts will be mitigated**. There are no established thresholds indicating the maximum frequency that maintenance activities may be performed prior to being identified as a *chronic maintenance problem*. Chronic maintenance should be defined, and the process by which resolution of chronic maintenance might be identified and resolved, should be developed.

Specific commitments for funding and implementing compliance and effectiveness monitoring, research, and adaptive management are lacking, and there is risk that a disproportionate amount of funding and effort will be placed on maintenance activities without consideration of the other elements of the program.

Some of our concerns may be addressed in successful application of the Adaptive Management element of the program. However, sufficient monitoring plans, training, and the definition of

Ms. Laura Hamilton
Habitat Conservation Division
February 22, 2002
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BMP success, will be a very important in ensuring the success of the Routine Road Maintenance Program.

Permit Regulation (viii of Introduction)

Page vii of Introduction - While permit compliance is spelled out as a requirement, the selection process indicates that the BMP's are selected prior to submitting a permit application. This could result in potential conflicts between the BMP and provisions of a permit. The permitting agency should be provided opportunity to provide early input in selecting the proper BMP, to avoid duplicative effort or conflicting provisions.

HPA Requirements - there are repeated references throughout the plan with regard to when and where an HPA is required. Most of these references incorrectly state that a HPA is required for work within the ordinary high water mark of watercourses. The wording of RCW 77.55.100 should be used to describe when and where HPAs are required. Approval from WDFW is required for any person or government agency prior to constructing any form of hydraulic project or perform other work which will use, divert, obstruct or change the bed or flow of any fresh or marine water of the state to ensure the proper protection of fish life

- 1) Bed is defined as the land below the ordinary high water lines of state waters, but does not include irrigation ditches, canals, storm water run-off devices, or other artificial watercourses except where they exist in a natural watercourse that has been altered by man
- 2) Phrase "to construct any form of hydraulic project or perform other work"
 - Does not include act of driving across an established ford
 - Does include driving across streams or on wetted stream beds at other areas
 - Does include work to construct or repair a ford or crossing
- 3) Approval is granted in form of permit - the Hydraulic Project Approval or HPA
- 4) HPAs are issued, conditioned or denied solely for protection of fish life, including fish habitat
 - Fish life is defined in WAC 220-110-020 as "all fish species, including but not limited to food fish, shellfish, game fish, and other non-classified fish species and all life stages of development of those species"

There is reference that new or retrofitted culverts must be designed for fish passage in accordance with WDFW's "Fish passage Design at Road Culverts Manual"(the Manual), and that the NMFS found that the standards within the manual would enable the attainment and maintenance of PFC for fish passage when used for new or retrofit culverts. However, we suggest that caution be exercised in the application of this manual regarding attainment of PFC. The Manual was specifically written to assist in the design of culverts to ensure that *fish passage* is provided, and does not promote the use of culverts as a desirable water crossing structure. The last chapter of

Ms. Laura Hamilton
Habitat Conservation Division
February 22, 2002
Page 3

the Manual identifies many of the potential adverse impacts to fish habitat which may arise as a result of culverts which are unrelated to passage. In addition, in some instances culverts may prevent the attainment of PFC due to the creation of a variety of potential adverse impacts including, disconnecting a stream from its floodplain, decreasing channel stability, loss of ecological connectivity, disruption of natural debris loading and transport, reducing natural rates of LWD and gravel recruitment, loss of channel meanders and habitat complexity and other impacts. Few of these risks are identified, and there are no suggested BMP's to mitigate them.

We would concur that many of the maintenance activities such as storm water facility maintenance, and street sweeping may provide short term benefits associated with application of BMP's. Through continued application, some may actually provide some long term habitat benefits with regard to maintenance of existing structures. However, the potential long term impacts associated with culverts and other structures located in or near watercourses, are not identified or addressed within the Biological Review or BMP's of the Regional Road Maintenance Program. Due to the potential for culvert installation to preclude the attainment of PFC and perhaps result in unmitigatable losses of habitat and function, we question the inclusion of water crossing structure replacement activities within the maintenance plan. Due to the complexity of site conditions and habitat, and the potential for unintended channel responses, it is difficult to create standardized BMP's for the replacement of water crossing structures.

While replacing culverts which are fish passage barriers, with culverts which provide passage is desirable, the new culvert may perpetuate limitations in achieving PFC, especially in the long term. When the design life of a water crossing structure, such as a culvert, expires, the program should provide means of evaluating site conditions to determine which type of water crossing structure is appropriate, to ensure that PFC can be attained. The current BMP's are inadequate to address the long term adverse impacts associated with culvert installations.

Page ix - Impacts of Road Maintenance on Habitat Conditions (Figure 2)

The Routine Road Maintenance Program does not provide a process by which the "circle of perpetual maintenance" is broken. There appear to be no established thresholds to identify when maintenance for various projects is defined as "chronic", or how the resulting cause of the need for maintenance is identified. It appears that this plan furthers the undesirable situation where it is easier to repeatedly perform maintenance on existing or poorly designed structures rather than identifying and resolving the root cause for the maintenance. The Routine Road Maintenance Program appears to prioritize maintenance activities through treatment of symptoms, rather than correctly diagnosing why maintenance is necessary. Further, there appears to be little emphasis on the process by which it is determined that maintenance is necessary. The Pre activity Evaluation identified on page 1.26, does not include means of identifying why maintenance is required. Correcting the root cause of needed maintenance should be one of the primary goals of the Routine Road Maintenance Program, especially with regard to those activities which result in adverse impacts to fish resources. Repeated short term impacts to fish life associated with

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application of the BMP's are frequently dismissed as inconsequential throughout the document. However, repeated application of BMP's, however minor the impacts may be, ultimately may result in cumulative impacts of significance, especially if PFC is precluded. The Routine Road Maintenance Program should not make it easier to "do a project over" rather than "doing it correctly".

Page x - Definition of "Maintenance" - We question the definition of *maintenance* as applied to the Routine Road Maintenance Program.

As defined in the Routine Road Maintenance Program, maintenance activity includes the installation of new culverts and other water crossing structures. We question why these maintenance activities will not be considered new development, or redevelopment, projects. We disagree with the premise that, "...road maintenance mitigates the impacts of the original construction of road structures, ongoing road use and preservation of the structure". We also disagree with the premise that road maintenance necessarily leads to habitat improvement as indicated in Figure 2 on Page ix. There are many scenarios where road maintenance will likely *perpetuate* adverse impacts to habitat conditions such as in instances where a culvert or road in close proximity to a stream is maintained, as it may preclude attainment of PFC. Many roads are located within floodplains and have eliminated the natural channel migration zone and important floodplain functions associated with PFC. If the road were not maintained, floodplain function may eventually be restored. Another example, would be debris removal at road culverts. Perpetually removing large woody debris (LWD) from a culvert eliminates an important component of PFC. The BMP's do not adequately address how LWD loading and maintenance will be achieved. Other than the minimal reference to addressing chronic maintenance in the Biological Review, the Routine Road Maintenance Program appears to focus on expediting the performance of maintenance activities.

The question arises whether or not the Regional Road Maintenance Program perpetuates maintenance, rather than addressing the ability to properly assess and correct the limiting factors to PFC. It appears that the Program overemphasizes perpetual maintenance rather than attaining PFC.

Under the definition stated in the Regional Road Maintenance Program, any new projects would be eliminated from consideration as maintenance. It may be difficult to implement, any new or corrective projects identified from the diagnosis of maintenance needs. We suggest that there should be an expedited review process by which new projects are reviewed and permitted if they are determined to accelerate attainment of PFC while preventing the need for future maintenance. For example, the identified maintenance activities which will occur in watercourses and streams can have significant impacts on fish and fish habitat. Activities such as bank armoring and dredging of natural watercourses, especially if periodically repeated, are unlikely to result in maintenance of PFC, and may prevent it. The relocation or modification of roads and structures are much more likely to result in attainment of PFC.

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Part 1 - Regional Program Elements

Introduction

Pages 1.2 - 1.6 - There are no program elements which indicate by what process it is determined that maintenance is necessary at a specific location. There are numerous examples throughout the state, where the need for maintenance was questionable, because there are no standards to define when it is necessary or what caused the need for maintenance. There is risk that some maintenance activities could be used to justify a budget under the "use or lose it" scenario for funding appropriations. It appears that this plan furthers the undesirable situation where it is easier to repeatedly conduct maintenance rather than identifying and resolving chronic maintenance problems, and relegates the program participants to treat the symptoms, rather than the problem.

Program Element 3

Training

We concur that the importance of training cannot be overemphasized. The success of the plan hinges on the proper selection and application of BMP's to the varying site conditions encountered in the field. Special emphasis should be placed on selecting the BMP's which are most likely to achieve the desired outcome, rather than those which are the least costly.

Program Element 4

Compliance Monitoring

There appears to be insufficient detail regarding monitoring requirements to determine whether or not the stated BMP's are likely to be successful. The monitoring protocol would have to provide sufficient detail to detect whether or not changes in baseline condition have occurred, and whether or not there is progression towards PFC. Identifying and monitoring the potential risks of maintenance activities will be complicated, when you consider other risks associated with natural variability or other land use activities.

The identification of those responsible for compliance monitoring, the level of monitoring detail required, the spatial and temporal parameters of monitoring, and the qualifications of monitoring personnel, should be clarified. It is indicated that each local agency will be responsible for program monitoring. It is questionable whether or not these agencies have qualified personnel or adequate funds to hire qualified consultants to perform monitoring. Monitoring may require funding beyond the capabilities of local agencies. The success of the program relies on sufficient funding for monitoring, to ensure that progress towards PFC is achieved. Prior to applying maintenance activities, each agency should be required to provide evidence of their monitoring capabilities. There appears to be risk that many road maintenance projects will be completed

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prior to any monitoring. Each proposed maintenance activity should have a monitoring plan submitted up front, to ensure that it will be implemented.

It is important that environmental staff are supervised by someone other than personnel in the maintenance program to ensure that independent, unbiased assessments of environmental compliance is provided. WDFW has observed many instances in which assessments are biased because engineering, maintenance, and environmental personnel share the same supervisor.

Compliance monitoring should not be limited to the periods in which maintenance activities and BMP's are applied. Long term monitoring should also be provided to determine if maintenance activities result in long term adverse impacts to PFC outside of the right-of-way. Water crossing structure installations and sediment removal can affect vertical and lateral channel stability, and bank protection can result in unanticipated channel responses.

Page 1.18 - monitoring should also be tied to weather, and other unexpected, conditions.

Program Element 5 **Scientific Research**

Due to varying site conditions and subjectivity in properly selecting and applying the proper BMP's, extrapolating results of specific case studies to other projects may be difficult. However, it is reasonable that general guidance can be provided.

Adaptive Management

The methods by which adaptive management is applied is also critical to the success of this Program. However, the protocol appears to be quite general and without specific responsibilities by participating entities of the Routine Road Maintenance Program. The efficiency and timeliness by which monitoring and research results are used to revise inadequate BMP's is critical. Standards should be provided to ensure that adaptive management functions at a reasonable pace. This may require a considerable commitment by participating agencies which is yet to be defined. Adaptive Management should be applied in a manner to address BMP mitigation deficiencies in individual projects as well as general BMP effectiveness, otherwise there may be a number of insufficiently mitigated projects resulting in the interim, until such time that effective BMP's are developed.

We question the statement on page 1.22 that, "In nearly all cases conducting maintenance activities in compliance with the Regional Program contributes to the conservation of the species". This is a rather bold statement which conflicts with the earlier statement that, "...little data could be found regarding the effectiveness of various BMP's". There is no question that many of the BMP's will likely have unanticipated adverse impacts to listed species. While

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conducting maintenance activities in compliance with the Routine Road Maintenance Program is a good first step, research and monitoring will reveal whether or not this goal is actually attained.

The spatial and temporal limits of monitoring should be specified. It is not indicated how long after a maintenance activity is implemented, that the site conditions will be monitored. Some adverse impacts may not be immediately apparent and may only arise after the next high flow (spring runoff or freshet) or flood event.

1.24 & 1.25 - Adaptive management leads to alteration of BMP's for implementation on future projects. If the BMP's are ineffective and adverse impacts continue, how is adaptive management actually applied? The protocol must involved means of applying adaptive management towards individual projects.

1.26 - While it is admirable to suggest that it is a goal is to provide mitigation for the original construction of a structure within the right-of-way, there doesn't appear to be a process by which to attain this mitigation in all instances. If the original construction of a road eliminated numerous meanders of a watercourse, and the floodplain was disconnected, how is this mitigated through application of the defined BMP's?

*attention
for the original
structure*

Program Element 7 Emergency Response

Emergency response to flooding or other disasters should be focused on providing short term responses to these events to avoid imminent threats to public health and safety, public or private property, and environmental degradation. This may include placement of temporary structures which may be removed after the threat is over. The long term responses to natural disasters should occur after the threat is no longer imminent.

Page 1.37 - The BMP matrix appears suitable for construction activities, but appears insufficient to address the long term impacts associated with maintenance activities.

Program Element 8 Biological Data Collection

The scope of the biological data collection element appears too narrow to capture many potential adverse impacts, and it will potentially affect BMP selection. Collection and monitoring of biological data before, during, and after maintenance activities should be expanded beyond the right-of-way, especially for projects such as bridge maintenance, bank armoring, LWD removal, or dredging and sediment removal within natural watercourses. These activities can result in substantial risk to habitat located off of the right-of-way.

The risks of negative outcomes of a project should also be identified and weighed against the desired positive outcomes to ensure that the appropriate BMP and activity alternative is selected. The current plan identifies only the potential positive outcomes.

Program Element 10 BMPs and Conservation Outcomes

The BMP outcome categories do not appear to address all potential impacts to fish life as a result of maintenance activities. Most outcome categories are focused solely on sediment reduction while various physical habitat parameters are combined into the single habitat protection/maintenance, outcome category.

The program identifies that the application of a BMP is to minimize potential environmental impacts associated with road maintenance activities. However, many of the BMP outcomes (see page 1.108) are not related to protection of the environment, but appear to be the desired outcomes of the maintenance activities.

There appear to be unresolved conflicts between the BMP outcomes identified in 1.33 and activities identified in the maintenance categories. As a result, long term and cumulative habitat risks may not adequately assessed.

Replacement of infrastructure should NOT be defined as "maintenance", as it is beyond the scope of this plan to adequately identify and address all environmental concerns for these types of projects. The BMP's address short term construction activities, but inadequately mitigate the long term habitat impacts.

Page 1.41 - Sample Checklist 1 (Fig. 14) - The sample checklist for "Activity and BMP Application", indicates that BMP's will be selected prior to obtaining necessary permits. This could create potential conflicts between provisions of a permit and the selected BMP. Permitting agencies should be involved in the initial pre-project review process and opportunity to participate or comment on the selection of the BMP to avoid conflicts.

Page 1.42 - The Sample "Pre-construction and Pre-maintenance Meeting checklist", should include suggested measures to identify the need for maintenance and attempt to reduce future maintenance needs. It should also include some means of determining if the maintenance activity is defined as a *chronic maintenance problem*. There appears to be little discussion regarding the protocol by which projects are selected or prioritized for implementation, and the selection process will apparently vary among governmental entities. The project selection protocol should result in selection of the least impacting alternative. It would be desirable to provide some general guidance regarding factors which should be considered when determining when it is appropriate to conduct maintenance, especially regarding maintenance activities in watercourses. We have observed instances where maintenance activities resulted in the need to

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conduct additional maintenance, such as with ditch cleaning activities resulting in a over-steepened, unstable slope, which then sloughs into the newly cleaned ditch. These concerns may be resolved through adequate training, monitoring, and adaptive management. There appears to be inordinate reliance on the mechanisms to ensure appropriate BMP selection and application. It is better to avoid initial potential risks, than to have to apply additional BMP's in the future to address an impact.

Maintenance Categories

Potential Conservation Outcomes are provided for each of the Maintenance Categories identifying the goals and potential benefits of the maintenance activity. However, there is no mention of the potential risks to fish or fish habitat as a result of performing the maintenance activity. These should be included for consideration in selecting the appropriate BMP. Perhaps there should be matrices which help determine risk associated with applying various maintenance activities.

The *potential conservation outcomes* resulting from implementation of the various BMP's, appear to be overstated. There is little reference to existing data, or data from monitoring, to provide confidence in these claims. Considerable time may lapse before the conservation outcomes may actually be achieved or supporting data is collected, and it may be prohibitively expensive to collect sufficient data to isolate and identify whether the conservation outcome resulted from a BMP, other land use action, or natural variability.

There is little discussion regarding the potential cumulative impacts resulting from repeated maintenance activities. Maintenance activities may occur at such frequency that the adverse impacts are perpetuated, and PFC is precluded. Repeated application of maintenance BMP's without addressing the cause of repeated maintenance, which may be located off right-of-way, may preclude natural processes such as channel migration, large woody debris recruitment, and coarse bed load recruitment, which are important in sustaining and achieving PFC.

The maintenance BMP's appear to only address the short term, site specific impacts and will not likely provide adequate protection and restoration of natural processes on a larger scale. Avoiding or improving specific elements of habitat through application of BMP's, without them being part of a comprehensive watershed restoration plan, may preclude attainment of PFC.

Maintenance Category 3 Enclosed Drainage Systems

Page 1.54 - One of the BMP outcomes should be to conduct this maintenance activity within the standard work window for a specific stream.

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Maintenance Category 4 Open Drainage Systems

Page 1.57-1.58 - In some instances cleaning ditches may exacerbate sedimentation of watercourses. BMP outcomes should include maintenance of natural, vertical and lateral channel stability.

Maintenance Category 5 Watercourses and Streams

It is our opinion that this section poses significant concern. There are many potential risks associated with application of these maintenance activities, which are not identified or assessed in the plan.

Page 1.62 - we question whether it is appropriate to define and include "replacement of structures" as maintenance activities. There are no apparent limits to define the scope of what replacement might include. If bridges, revetments, bulkheads, dikes, and large culverts will be included under this definition, it is unlikely that application of the listed BMP's will adequately mitigate the potential environmental risks. Structural replacement should be specifically defined and limited. Projects involving relatively small culverts which also create barriers to fish passage could perhaps qualify as maintenance.

Projects involving maintenance activities which remove bedload and vegetation from natural watercourses are indicative of a flaw in project design. We are concerned that these practices are defined as maintenance activities, due to the potential short and long term risk to fish resources.

Thresholds or standards should be established to determine when these maintenance activities will be implemented. In addition, it should be established who would be determining when thresholds have been attained to implement necessary maintenance activities.

We are concerned that BMP outcomes regarding maintenance of instream LWD are not adequately identified. Planting vegetation without allowing recruitment or transport of LWD within a watercourse, does not provide sufficient mitigation to avoid impacts to fish habitat. Debris may be *relocated* to prevent problems to structures, but should not be removed. The positive correlation between fish productivity and organic debris is well documented.

Page 1.63 - Sediment accumulations should be removed *prior to* removal of BMP's, not after

Page 1.66 - It appears that in some instances, that application of maintenance activities and BMP's could have an outcome which results in significant risk to fish despite it being selected as

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the best alternative using this plan, especially with regard to maintenance activities performed in streams.

Throughout the document there appears to be little recognition of the role of large woody debris as fish habitat, and the applied BMP's do not adequately mitigate from its removal. Replanting vegetation may eventually result in recruitment of LWD, but many decades may elapse before recruitment begins. There are no identified BMP's which directly address the interim LWD habitat needs if it is removed.

Maintenance Category 6 Stream Crossings

Page 1.67- We again question whether it is appropriate to define and include "replacement and installation of structures", as maintenance activities. There are no apparent limits to define the scope of what replacement might include. In reviewing the definition in the Routine Road Maintenance Program, we assume this could include new structures. The BMP outcomes listed in the section are significantly inadequate to address potential risks associated with installing a new bridges, or other water crossing structures. There should be consistency throughout the document regarding the definition of *maintenance* and the use of terms, *installation*, *replacement*, and *upgrade*.

For activities such as replacement of water crossing structures, a separate Biological Review may be necessary to adequately assess risks to fish life. The existing Biological Review is inadequate to identify potential risks associated with projects of this magnitude and complexity. Ecological connectivity, floodplain connectivity and function, channel stability, recruitment rates of LWD and coarse sediments, and habitat complexity, are a few of the potential risks associated with these types of projects which are not mitigated through application of the identified BMP's.

Page 1.70 - The reduction of flooding is not necessarily a desirable habitat goal, as many of the desirable habitat features are created through flood events. *Natural* rates and magnitudes of flooding and erosion of coarse sediments are important processes for the maintenance of riverine ecosystems.

Maintenance Category 15 Vegetation

There appears to be no differentiation regarding vegetation and maintenance goals between eastern and western Washington. There are unique challenges to establishing and maintaining vegetation in the arid climate of eastern Washington, which should be reflected in this section.

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Selective removal and replacement of vegetation should be considered as an applicable BMP. This would be preferable to wholesale removal and replacement of mature vegetation with young seedling or seed, as interim habitat could be provided during conversion of vegetation types.

Some of the BMP outcomes listed on page 1.108, and other maintenance activities, appear unrelated to the definition of a BMP provided in the Glossary.

Part 3 - 4(D) Application for Individual Agency

Section 3 - General Procedures

Page 3.18 (3b) - There should be more detailed information regarding *the Project Selection Process*. It appears that the decisions regarding selection and planning of project activities will occur with little input from environmental planners, although it is noted that they will have some input. This can be a very important part of the process to avoid unnecessary risk. Selection of the type of maintenance activities to be performed is itself a BMP, as it may determine what risks will occur. There may be several ways in which a project may be accomplished, all with varying degrees of risk, and there should be a process by which the best maintenance alternative is selected. In many instances, the cause for the need for future maintenance may be identified and resolved. The current program emphasizes only the selection, application, and monitoring of the BMPs to mitigate the maintenance activity. However, selecting the proper maintenance activity may preclude the need for application of BMP's.

Biological Review

Page 11 - there is uncertainty regarding the actual risks associated with performing the maintenance activities and applying the BMP's, as the desired conservation outcomes may not be achieved. This plan relies heavily on training, adaptive management and monitoring, which must be adequately implemented to ensure the desired outcomes are achieved. It would be helpful to identify and anticipate these risks, especially during the initial application of the Routine Road Maintenance Program.

The definition of maintenance activities provided on page 12 of the Biological Review is different than that provided on Page 1.67 of the Regional Road Maintenance Program.

Page 12 - If replacement of structures is defined as maintenance in the Routine Road Maintenance Program, any new environmental standards, as well as engineering standards, should apply.

Page 81 - (5.1) - It is our opinion that the application of some of the BMP's, especially those associated with work in watercourses, may preclude attainment of PFC and long term survival of

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listed salmonids. Applying repetitive maintenance activities would likely preclude natural progression towards PFC, especially for projects located within a floodplain or watercourse.

Page 82 - *Effects of roads and use on PFC* (bottom of Page) It is our opinion that the identified list of potential effects of road maintenance activities are significantly understated, especially with respect to large scale projects such as replacement of water crossing structures.

5.3 Factors Affecting Habitat

In general, the factors affecting habitat of listed species resulting from road maintenance activities are significantly understated, while the benefits associated with implementing BMP's to mitigate maintenance activities is overstated. Identification of the long term risks to ESA listed species associated with implementation of the BMP's is absent from the review.

Page 83 - We strongly disagree with the statement that, "The contribution of historic and current road maintenance practices is minimal relative to the many other land use practices that have shaped the environmental baseline". While this statement may be valid on a statewide scale, there are many specific examples where chronic maintenance activities, including activities which perpetually maintain poorly designed structures, have had very significant impacts to certain watercourses.

5.3.5 Habitat

Page 87 - Cumulative factors impacting habitat and associated with perpetual road maintenance activities should be addressed in this section.

6.0 Analysis of Effects

Page 92 - We disagree with the statement that, "... road maintenance impacts to habitat are a relatively small factor...". There is significant evidence and testimony by state and federal biologists which would refute this claim. The effects of cumulative road maintenance, and replacement of water crossing structures, can be significant.

6.1 Road Maintenance

Page 92 - We maintain that in some instances, there are viable alternatives to road maintenance activities which can lead to preventing the need for future or repetitive maintenance activities. The Routine Road Maintenance Program should provide incentive to relocate or redesign structures which have significant adverse impacts on listed fish.

Page 94 - The need for blockage removal associated with LWD loading is quite rare in natural systems. It is always preferable to *relocate* the debris rather than to remove it, to ensure PFC is maintained. The Routine Road Maintenance Program should be revised to use the term *relocation* rather than removal of LWD with respect to natural or altered natural watercourses. Blockages rarely affect flow volume unless water is diverted from the channel. Debris jams should also only be removed within the appropriate Work Window for the specific stream.

Page 96 - This section has no corresponding protocol within the Routine Road Maintenance Program to provide means to address the number of chronic maintenance problems that contribute to habitat degradation. There is need to significantly expand this section within the Routine Road Maintenance Program to define how chronic maintenance projects are identified and addressed to break the cycle of repeated application of maintenance activities.

Page 97 - Many potential risks and potential negative impacts associated with the identified maintenance activities, are not identified in the Biological Review or the Regional Road Maintenance Program. We disagree with the statement that, "Positive conservation outcomes far outweigh negative impacts", since the negative impacts are not adequately identified, especially the *long term and chronic* negative impacts. Monitoring maintenance activities will determine if this goal is actually achieved.

Page 97 - The conditions under which an HPA is required is inaccurate. The wording of RCW 77.55.100 should be provided to describe when and where HPAs are required. Approval from WDFW is required for any person or government agency prior to constructing any form of hydraulic project or perform other work which will use, divert, obstruct or change the bed or flow of any fresh or marine water of the state to ensure the proper protection of fish life

Table 24, Page 106 - This table appears to be overly optimistic in presenting the benefits of applying the guidelines within the Regional Road Maintenance Program to maintenance activities. Simple variables such the timing of the project, or weather conditions, can significantly alter the values within the table.

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6.5 Adverse Impacts

6.5.3 Earth Surface and Cleaning Work -

Page 120 - It is our opinion the risks associated with "Shore Defense Work" are understated. Bank armoring, confining stream channels, and precluding a stream from reestablishing its natural channel migration zone, can have significant impacts on channel morphology and function, including its ability to attain PFC. Maintenance activities, such as armoring a road prism, may preclude long term recovery to PFC for listed species. The BMP's listed in this section are not likely to mitigate the risks to listed species.

6.5.4 Classification: Hydraulic Modification

Channelization and ditching of natural or altered watercourses should not be considered a routine maintenance activity, as there is little likelihood that some streams would ever attain PFC using this approach. We recommend that this maintenance activity be dropped from consideration as part of the Routine Road Maintenance Program. The perceived need for this maintenance activity is indicative of a structure or watercourse in need of redesign or relocation. The impacts from these activities would most likely significantly outweigh any improvement realized through BMP application. We question the statement that, "because the duration of drainage and channel maintenance work is typically short, disturbance related impacts would be negligible". We have observed significant long term damage to PFC of fish habitat resulting from the operation of heavy equipment over a very short time period. The adverse long term effects of channelization is usually significant. As currently described in the Routine Road Maintenance Program and Biological Review, this activity would likely pose very high risk to fish life.

Page 123 - Increasing conveyance rates in storm water systems will not likely result in beneficial improvements to PFC.

6.5.5 Hydraulic Modification

Page 124 - There are very few, if any, instances in which large woody debris would actually create a threat to fish habitat.

Large woody debris should be *relocated* from bridge abutments and culverts, but it should not be removed from the stream. Most streams are deficient in desired LWD loading.

7.0 Conclusion on Conservation

Page 133 - There appears to be some risk that PFC may not be achieved or maintained through application of the Routine Road Maintenance Program in some instances, especially with regard to maintenance of structures in, or along, watercourses.

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There is insufficient flexibility in the Routine Road Maintenance Program to break the cycle of perpetual maintenance, and identify and resolve the cause for the need for maintenance activities.

It is our position that not all of the potential negative affects to habitat resulting from maintenance activities can be mitigated, or offset, through application of the BMP's identified. Most of the BMP's are focused on mitigating the short term affects of project construction activities, and not on mitigating the longer term impacts. There is risk that mitigation of cumulative affects, and maintenance associated with replacement of water crossing structures, will not occur.

Page 134 - (Paragraph 1) The language of RCW 77.55.100 should be used when referencing when HPA's are required; the statement in this paragraph is incorrect.

While HPA's include provisions for the protection of fish life, not all adverse impacts to fish and fish habitat associated with a maintenance activity can be mitigated through an HPA. Many impacts associated with upland maintenance activities are outside the scope of Hydraulic Code jurisdiction, and therefore must be addressed in the Routine Road Maintenance Program.

Page 135 - Element 4 - There is need for more detailed information within the Regional Road Maintenance Program to better define success in the application of BMPs. After the biological baselines are delineated, long-term monitoring may be necessary with some types of maintenance activities and BMP's, to ensure that PFC is actually maintained or achieved.

Page 136 - There is no data to support statements associated with Figure 7. There are likely instances in which not applying maintenance activities and BMP's would accelerate recovery towards PFC.

Concluding Comments

There appears to be less emphasis on monitoring, adaptive management, and conservation outcomes, than on completion of maintenance activities. There may be considerable risk that the program may deviate from intended goals due to lack of commitment and funding for some project elements. There is also concern that implementation of this program in some circumstances, may actually preclude attainment of PFC by providing more incentive to do a project over, rather than properly diagnosing and correcting the problem.

While we support the efforts and cooperation involved in the development of the Routine Road Maintenance Program and the general protocol which has been developed, it is our opinion that additional modification of the plan is necessary to reduce risks which are likely to result. In general, the habitat benefits of application of the BMP's in association with maintenance activities are overstated while analysis of likely risks are either insufficient, or not identified.

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We would question whether the replacement of water crossing structures including bridges and culverts are appropriately within the scope of this program, as many of the potential impacts resulting from the installation of these structures are not recognized or addressed within the Biological Review. Replacement of water crossing structures don't appear to fit within the definition of *maintenance* as defined within the Routine Road Maintenance Program's glossary. The BMP's are focused on mitigating the short term impacts resulting from various construction activities and don't address the potential long term impacts to fluvial geomorphology, which can occur well out side the right-of-way of a road.

Thank you for the opportunity to provide these comments. If you have any questions, please contact me at (509) 457-9306.

Sincerely,



Perry J. Harvester
Habitat Biologist
Environmental Services Division

cc: Regulatory Services
SEPA Coordinator, WDFW



City of Seattle

Gregory J. Nickels, Mayor

Seattle Transportation

Grace Crunican, Director

February 25, 2002



Laura Hamilton
Habitat Conservation Division
National Marine Fisheries Service
510 Desmond Drive, Suite 103
Lacey, Washington 98503

RE: Response to *Federal Register* publication 67 FR 17, Pages 3688-3689 requesting comments on the Regional Road Maintenance Endangered Species Act Program.

Dear Ms. Hamilton:

It has been the City of Seattle's pleasure to participate in the crafting of the Regional Road Maintenance Endangered Species Act Program Guidelines (RMP) over the past two and a half years. As a member of the Regional Forum, the City continues to support the on-going development of the RMP and last year began implementing the program. The RMP is comprehensive, provides an excellent format for addressing potential impacts of road maintenance activities and provides many best management practices protective of salmonids.

Although the City is not seeking a "take limitation" from the National Marine Fisheries Service (NMFS) at this time, we are continuing our evaluation of City operations in light of the RMP as a means of improving environmental performance. For your interest, we will be implementing vegetation maintenance practices that are more protective of salmonids than those described in that category of the RMP. You may wish to take the following specific approaches and comments on the vegetation management category into account as you review the final RMP.

First, the City believes that for vegetation maintenance to be protective of salmonids, best management practices should be conducted according to an integrated pest management (IPM) approach as described in the *Revised Code of Washington* (RCW 17.15) - to first prevent pest problems and then treat the problem. Both the City of Seattle and King County are implementing progressive IPM programs that follow the state hierarchy of biological, cultural, mechanical followed by chemical controls. The City believes that an IPM approach should be the thrust of the vegetation maintenance category and encourages NMFS to rework the chapter to incorporate IPM strategies.

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The City has also carefully reviewed the section delineating vegetation management zones for the road right of way. We have some concerns regarding this approach, especially the designation of a vegetation free zone described as: 1) curbed roadways beginning at the curb face and extending to the back of the sidewalk; and 2) non-curbed roadways beginning at the edge of the traveled way or paved shoulder and extending to include all "unpaved shoulder areas ... to a point where rock base material intercepts native soil or dirt fill." This approach runs contrary to Seattle's urban forestry and sustainability policies. Vegetation free zones in City right-of-way would encourage the elimination of street trees, preservation trees and planting strips – all urban forestry activities Seattle actively engages in and which reduce or restore pervious surface area in the City. To make the vegetation maintenance category more applicable to varied rights-of-way around the state, I suggest the RMP identify standards appropriate for various roadway classifications from interstate to city streets.

I want to thank you for the opportunity to comment on the RMP. If you would like to discuss Seattle's maintenance practices within the road right-of-way further, please contact Sandy Gurkewitz, Seattle Transportation Environmental Coordinator at (206) 684-8574

Sincerely,



Grace Crunican, Director
Seattle Transportation

GC/SG:ksr

cc: Chuck Clarke, Director, Seattle Public Utility
Martin Baker, ESA Program Director
Sandy Gurkewitz, Environmental Coordinator, Seattle Transportation
Kathy Brown, Chair, Regional Road Maintenance ESA Forum



Nooksack Indian Tribe Natural Resources Department

3891 Uluquance Drive • P.O. Box 157 • Deming, WA 98244
(360) 592-2632 • Fax (360) 592-5753

Feb. 25, 2002

Laura Hamilton
Habitat Conservation Division
National Marine Fisheries Service
510 Desmond Drive, Suite 103
Lacey, WA 98503



Dear Ms. Hamilton:

The Nooksack Tribe co-manages the Treaty-protected resources in the Nooksack watershed, and the purpose of this letter is to provide comments on the Routine Road Maintenance Program (RMP) submitted to NMFS pursuant to regulations promulgated under section 4(d) of the Endangered Species Act.

In seeking ESA exemptions regarding take, it is extremely important that this, or any, Plan provide the level of specificity to ensure attainment and persistence of properly functioning conditions (PFCs). This plan lacks the specificity to provide certainty that PFCs will be achieved, and in several areas we think it will jeopardize attainment of PFCs. Additionally, attainment of PFCs needs to be evaluated in the cumulative context of other anthropogenic actions, including other land uses that will also affect habitat recovery.

We offer examples of recent Washington Department of Transportation (WSDOT) actions to illustrate the above points. The WSDOT recently commissioned a report entitled *North Fork Nooksack River Corridor Analysis* (GeoEngineers 2001), which evaluated State Route (SR) 542's impacts to the North Fork, by assessing river processes and their implications for the transportation route. The road restricts as much as 75% of the river's active channel migration width in places. Instead of continued emergency, "Imminent Threat", and routine maintenance at the numerous chronic repair sites, the GeoEngineers report recommends road relocation along several reaches, to best accomplish the transportation needs, while accommodating the natural river (and habitat-forming) processes.

This spring chinook stock is essential for recovery, and comprises one of only 5 genetic diversity units for the entire Puget Sound ESU. The Fork is also critical for bull trout. As such, NMFS should not conclude that continued "routine maintenance" along the present route, in areas where active channel migration is restricted up to 75%, WILL impede attainment of PFCs, including LWD targets. Indeed, continued constraining of channel migration zones (CMZs) is not even considered in the Plan's Effects Analysis (page 97), or anywhere in the habitat goal BMP's. It does not appear that any evaluation has been conducted of the impacts to attainment and persistence of PFCs such as LWD

cumulative components *within* the Plan including: 1) constrained channel migration; 2) lost riparian recruitment due to riparian encroachments and vegetative management in stream-adjacent roads; 3) stream channel crossings, including routine clearing of LWD from the upstream side, and; 4) direct habitat alterations including LWD removal. Prior to issuance of a take exemption, NMFS must determine the cumulative effects of these "routine" actions on the attainment and persistence of PFCs including LWD and pools.

Additionally, we do not believe that the proposed measure in the Plan (pg 131) of referring chronic maintenance and habitat problems to agency specific CIP offers any assurance toward achieving PFCs. As early as 1989 Monica Gowan was funded by WSDOT to assess portions of SR542, and her recommendation 13 years ago was to relocate the road (Gowan 1989). We need assurances of implementation, not just referrals that offer no assurances of implementation.

In truth, many, if not most "Emergency Slide/Washout Repairs" are due to lateral channel migration into road toe slopes, where the existing road or bridge has constricted channel movement. Instead of assessing and restoring CMZs, and the habitat forming processes created by channel movements, the proposed slide or washout repairs include measures including "armoring with toe rock". This certainly will impair attainment and persistence of PFCs, and will exempt activities from take that will continue to degrade habitat conditions for listed salmonids including Puget Sound chinook and bull trout. As documented in Peters et al. (1998), Beamer and Henderson (1998), and Schmetterling et al. (2001), rip-rap (armor rock) has serious deleterious effects on juvenile salmonids including the listed species, and armoring with rock should explicitly be excluded from any exemptions from take, as this is not supported by best available science. Instead, addition of armor rock will almost certainly degrade the existing baseline capacity of our habitat for listed species. Instead of facilitating habitat recovery, these actions will often degrade habitat. Sadly, this is a step back from where we have been going with WSDOT in local maintenance actions for chinook and bull trout in our area.

Another area where the plan is inadequate is bridge maintenance. Too often, "routine" bridge maintenance is conducted where existing bridges are inadequate for the circumstances. For example, we recently received a scour repair proposal under the SR 9 bridge crossing of the North Fork, wherein the proposed remedy is further constraining the channel width through adding substantial rip-rap rock, instead of addressing the root of the problem, which is the severely constrained channel due to an inadequate bridge width. This is another example of treating symptoms instead of causes, and this proposed project will add more angular rock, further reducing our environmental baseline. What would better address the transportation needs and improve attainment of PFCs is replacing the structure with a bridge that is adequately sized, and does not have center supports that strain LWD and restrict LWD recovery in the mainstem Nooksack River. Our riparian analysis results indicate there are no reaches along the mainstem Nooksack River that currently have high LWD recruitment potential. This strongly suggests that attaining LWD PFC targets in this critical area will need to be addressed through the routing of LWD from upstream areas where LWD recruitment potential is better. NMFS must make a determination of how crossing structures, and the maintenance associated

with them (including cutting LWD) cumulatively affect the attainment of PFCs in downstream reaches, including mainstem rivers, prior to issuance of any exemption for this.

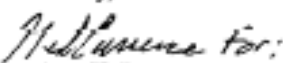
This plan is very loose and leaves far too much to the discretion of the local agency (such as WSDOT). A recent example of how this could impede attainment of PFCs again comes from a recently proposed "slide repair" project on SR542, which has been deemed an "Imminent Threat", at mile post 37.7. The proposed bank repair is apparently consistent with the Washington Department of Fish and Wildlife's Integrated Streambank Repair Manual, but WSDOT still proposed to remove a logjam on the other side of the thalweg, that, during recent high discharge events, has deflected flow towards the road toe slope. In discussions with WSDOT, we learned that they wanted to avoid a design that would trigger the need for Federal permits, and they were also constrained by the amount of funding they could spend on the repair. This suggests that the discretionary elements left vague in this Plan, such as in channel LWD removal, are likely to be invoked to save costs and avoid permits, to the detriment of listed and Treaty-protected salmonids and attainment of PFCs to recover them. We believe that through working with WSDOT to review plans for the repair at MP 37.7, we have now convinced them that they can achieve the slope stabilization they need, without altering or removing any instream LWD.

The above examples are not intended to reflect negatively on WSDOT, or any other local government. They are merely intended to provide insight on the serious omissions in the Plan, and the likely detrimental consequences from approving it. Ironically, the Nooksack Tribe has been working hard to improve our relationship with WSDOT on projects including their maintenance projects. We have been seeking early review and input on their projects ever since their "emergency repair" on SR542 at 4-mile flats removed a logjam and obliterated 6 spring chinook redds.

This Plan glosses over the reality that routine maintenance is still discretionary, and proposed actions need to be evaluated site specifically, with external review, to best accomplish the desired outcome, while not impeding salmon recovery. The Plan, in its present form, is inconsistent with attainment and persistence of PFCs, and ultimately of achieving salmon recovery.

Thank you for considering these comments. If you have questions or need additional information, please do not hesitate to call.

Sincerely,


Robert Kelly
Director

References

Beamer, Eric M., and Richard Henderson. 1998. Juvenile salmonids use of natural and hydromodified stream bank habitat in the mainstem Skagit River, northwest Washington. Report prepared by the Skagit Systems Cooperative for the U.S. Army Corps of Engineers. LaConner WA.

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Peters, Roger J. Brian R. Missildine, and David L. Low. 1998. Seasonal fish densities near river banks stabilized with various stabilization methods. First year report of the flood technical assistance project. U.S. Fish and Wildlife Service. Lacey, WA.

Schmetterling, David A., Christopher G. Clancy, and Troy M. Brandt. 2001. Effects of rip-rap bank reinforcement on stream salmonids in the western United States *in* Fisheries. vol. 26, no. 7.



MUCKLESHOOT INDIAN TRIBE

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Phone: (253) 939-3311 • Fax: (253) 939-5311



February 25, 2002

Michael R. Crouse
Assistant Regional Administrator for HCD
National Marine Fisheries Service
525 NE Oregon Street
Portland, Oregon 97232-2737



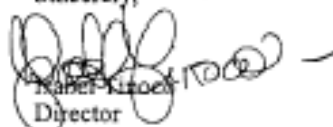
Re: Request to Extended Comment Period
Regional Road Maintenance Guidelines (4(d) Rule)

Dear Mr. Crouse:

On February 20, 2002, we received copy of a letter (dated 1/31/02 and addressed to "Interested Parties") announcing notice of availability and request for comments on a Routine Road Maintenance Program submitted to NMFS under section 4(d). The notice and the extremely short period available to comment came as a surprise to the Tribe given that the proposed guidelines can potentially affect treaty protected resources. Furthermore, NMFS has not consulted with the Muckleshoot Indian Tribe on the proposed guidelines as required by the Secretarial Order of June 5, 1997.

The Muckleshoot Indian Tribe requests that the time period to comment on the "Regional Road Maintenance Guidelines" be extended by at least 30 days, and formally requests an opportunity to meet to discuss the guidelines.

Sincerely,


Robert Lohn
Director

cc: Robert Lohn, NMFS Regional Director
Laura Hamilton, Habitat Conservation Division

April 12, 2002

Laura Hamilton
Habitat Conservation Division
National Marine Fisheries Service
510 Desmond Drive SE
Suite 103
Lacey, Washington 98503

RE: Regional Routine Road Maintenance Program Submittal Under Section 4(d) of the Endangered Species Act

Dear Ms. Hamilton:

The Muckleshoot Indian Tribe's Fisheries Department submits the following comments regarding the "Draft Regional Routine Road Maintenance Program" to be considered for take exemption limit 10 under Section 4(d) of the Endangered Species Act, published on January 25, 2002 in 67 Federal Register 17. This program would provide coverage for road maintenance activities conducted by road and transportation agencies of the following jurisdictions that are within the Muckleshoot Indian Tribe's Usual and Accustomed Area (U&A): the State of Washington, King, Pierce, and Snohomish Counties, as well as, Bellevue, Burien, Covington, Everett, Kenmore, Kent, Lake Forest Park, Maple Valley, Newcastle, Renton, SeaTac, Sammamish, Shoreline, and Tacoma, as well as, others that may apply at a future date. Due to the extensive area of coverage proposed, this proposal has a great potential to adversely affect treaty-protected resources of the Tribe. As a result, these comments are put forward in the interest of protecting and restoring the Tribe's treaty fisheries resources.

One of the major problems with the proposed Road Maintenance Program (RMP) is that it fails to provide any opportunity for the Tribe to receive and review proposals that will be submitted under this program. The RMP proposes to defer many decisions to the Washington Department of Fish and Wildlife's Hydraulic Project Approval permit process and the US Army Corps of Engineers 404 permit process. There is no requirement within the RMP for the local governments, the Washington Department of Transportation, or the Washington Department of Fisheries, or the US Army Corps of Engineers to coordinate with the Tribe. For example, there is no mention of tribes as resource agencies on page 1.19 under the "Coordination with Resource Agencies". ~~All of the activities mentioned on page 1.19 and 1.20 should also be coordinated with the Muckleshoot Indian Tribe.~~ The Muckleshoot Indian Tribe may have information that is important for the implementation of this program (i.e. fish distribution). Furthermore, the Tribe should be given the opportunity to review permits, scopes of work for data collection, best management practices evaluations, etc. The program should be updated in several places to address this concern and we are willing to work with you to do so.

Another major problem with the RMP is that it proposes to use the 1999 Washington Department of Fish and Wildlife's Fish Passage Design at Road Culverts Manual. ~~This Design Manual is not adequate to provide passage for all life stages of salmonids and will not "enable the attainment and maintenance of properly functioning conditions for fish passage" (page 1.70 of Part I of the RMP).~~ Since culverts are the topic of litigation as part of U.S. v. Washington, NMFS should

Muckleshoot Indian Tribe Fisheries Department
Comments to the Proposed Regional Routine Road Maintenance Program Submittal Under Section 4(d) of
the ESA April 12, 2002

discuss this manual and its adequacy to protect ESA species with the Tribe. We suggest that this design standard be removed from the RMP until NMFS and the Tribe come up with adequate fish passage standards.

A third major problem with the RMP is that the ~~details and standards are left to agencies that do not have authority to implement the ESA or the RMP to protect the responsibility of either WDFW or the Army Corps to implement the ESA or the RMP proposes such an approach.~~ Furthermore, ~~there is no explicit requirement in the RMP that either WDFW or the Corps work with the Tribe to ensure that its treaty-protected resources are protected and/or restored.~~

We are also enclosing page specific comments for each part of the RMP for your review and consideration. We are reserving any comments that we may have on the Part 3 submittals until Parts 1 and 2 are modified as we suggest in our page specific comments. If you have any questions about these comments or would like to set up a meeting to discuss them further, please contact me at (253) 939-3311, extension 116.

Thank you for the opportunity to comment on this document.

Sincerely,

Karen Walter
Senior Watershed Coordinator

Cc: Tim Romanski, USFWS
Cindy Burger, ESA Coordinator US ACOE
John Palmer, ESA Coordinator, US EPA
Bruce Davies, NWIFC

INTRODUCTION

Page Specific Comments

Page iii

This page is missing two citations. First the 4(d) rule for salmon and steelhead should be cited in paragraph one. Second, the citation to support the statement that habitat degradation is a major factor of decline for bull trout and West Coast listed salmonids is missing.

Pages iii and iv

The assertion that road maintenance practices can contribute to the conservation of listed species is not supported. It is merely a hypothesis and should be written as such.

Pages viii and ix

The last and first paragraphs on these pages, respectively, appear to suggest two things of concern. First, there is a statement that this program will be separate from any future development or redevelopment regulations. If this is the intent, then it is difficult to see how this program will be coordinated with other efforts, as well as the purpose of having an "adaptive management philosophy" applied to the RMP. The RMP will be meaningless if it does not affect future development and redevelopment programs and regulations. Second, there is no basis to allow the RMP to be considered "mitigation" since neither the impacts nor the actual mitigation measures that will be derived from the RMP are explicitly stated. Therefore, the RMP should not be exempt from development and redevelopment regulations adopted pursuant to the land use or stormwater operational programs or any other future development/redevelopment programs.

Page ix

There is no data to support Figure 2 in the RMP. It is nothing but a diagram of hope.

Page x

There is no definition of "major" which is used here at the bottom of the page, but also elsewhere in the RMP. Without a definition, this will be left to the interpretation of individual jurisdictions and it is doubtful that the listed species will be conserved.

PART I- REGIONAL PROGRAM ELEMENTS

A. Program Elements

Program Element 1 - The proposed Regional Forum is a positive element of the RMP. This group should provide information and oversight that is currently lacking from watershed road maintenance activities. The Tribe should have the opportunity to participate in this Forum if it desires.

Program Element 2- ~~It is not clear as to what the standards are that~~ the Regional Forum and WSDOT will use review programs submitted under the RMP. It is also not clear as to what the standards will be used by NMFS /USFWS to review the proposed applications under Part 3.

Program Element 3 - ~~It is not clear as to what training is offered~~ by the existing WSDOT Technology Transfer Center and how this training is consistent with other programs that the state is promoted from individual agencies (i.e. WDFW) or the Governor's Salmon Office. One element that will be important for road maintenance personnel is ~~fish identification~~ (particularly juvenile salmonids) and ~~training in habitat assessments~~. Neither of these two specific issues is discussed anywhere in the RMP, including the current Part 3 applications by specific jurisdictions.

The beginning of this section claims that routine road maintenance activities without BMPs ~~"have a slight cumulative impact on aquatic habitat"~~, the extent and magnitude of that impact is completely unknown". Routine road maintenance activities without BMPs have had more than a slight cumulative impact on aquatic habitat (see Spence et al 1996; Gregory and Bisson 1997; NMFS 1998, etc.). Furthermore there is something known about the extent and magnitude from existing information (Booth 1991; Booth and Jackson 1994; May et al. 1997, etc). ~~These~~

~~statements are misleading and should be modified.~~

- Also on page 1.31, the first bullet mentions that biological data will be gathered to identify sensitive habitat resources with Right of Ways. ~~"Sensitive habitat resources are not defined in the RMP and should be so that an assessment of the RMP can be made."~~

Again on page 1.31, the third bullet indicates that there are places where the guidelines will be applied and places where they will not be applied. It is not clear as to why this statement is in the guidelines. ~~They should apply to all activities seeking 4(d) coverage in the RMP and not left to the discretion of an individual.~~

Furthermore, since as the RMP notes, there are roadside "ditches" that are actually salmonid-bearing waters, ~~there should be a map in the RMP that indicates where these areas currently are and a program to collect additional information to make sure that the most protective BMPs are put into place where there are needed;~~ i.e. fish-bearing waters. The RMP lacks any existing fish use data, which makes it impossible to conduct an analysis of the program. Furthermore, ~~the data collection program is too vague and left to a future process without any details, including habitat assessment using a particularly methodology and a commitment to take this information and make it readily available to conservation agencies.~~

Program Element 9-

The formal reports and the quarterly newsletter should be ~~automatically sent to the Tribe~~ when they are sent to the Services.

Program Element 10-

page 1.33 On page 1.34, it is not clear what is meant by the term ~~"conservation viability"~~. If the term means financial resources to do adequate planning, design, and mitigation, then Services should not accept the RMP because it is too discretionary and will not sufficiently conserve the listed species.

On page 1.34, there are three bullets that describe the purpose of the Regional Program BMPs. It is not clear in this section (or elsewhere) ~~if all three of these bullets apply to under BMP activity or not.~~ For example, elsewhere in the RMP, habitat protection is describes as "where appropriate" or "where feasible". ~~If habitat protection activities (and restoration) are not fundamental portions of the majority of activities under this RMP, then it is doubtful that the RMP slow the rate of degradation, let alone sufficiently conserve the listed species.~~

On page 1.41 there is a sample checklist to assist the jurisdictions with determining which BMPs to apply to which projects. In this checklist, there is a question regarding fish presences. ~~It is not clear how this will be determined without a map in the RMP by jurisdiction or how the individual filling out the checklist will determine this.~~ Even King County's submittal in Part 3 fails to note that they have public rules regarding the assumption of fish presence, so ~~it is not clear that these public rules will apply to their RMP or not.~~ These public rules themselves may not be adequate to protect salmonid bearing waters; however, without the explicit intent to use them, it is not clear what standard King County will be using.

X On page 1.42, in the "Pre-Construction and Pre-Maintenance Meeting" checklist it notes that if fish exclusion is required, then the applicant is to follow the protocol in Appendix E. ~~Appendix E as written does not require the applicant to document take and supply this information to the Services and the Tribe.~~ Since fish exclusion techniques are the most likely opportunity for direct take to occur, the Services should require that the applicants record and report take to the Services and the Tribe.

B. Maintenance Categories

The conservation objectives listed for each of the maintenance categories are written too broadly and ~~should have a defined, measurable objective.~~ Otherwise, it is impossible to discern if the BMP activity is meeting the project goals or not. Furthermore, such a broad approach ~~appears to be inconsistent with requirements for NPDES permits under the Clean Water Act.~~ The Environmental Protection Agency should be consulted prior to the Services agreeing to this approach under the ~~new Clean Water Act and Endangered Species Act integration MOU.~~

Maintenance Category #1- Roadway Surface

This category will allow the installation of roadway surfaces, ~~which implies new pavement not maintenance of existing pavement.~~ It will also ~~allow new access roads.~~ Both of these activities should not be allowed in the RMP. On page 1.46, the RMP notes that ~~shoulder work will "increase infiltration or biofiltration", which is not accurate~~ for areas where the shoulder will be paved unless a porous material is used. See page 1.45 where gravel shoulders may be paved.

Maintenance Category #2- Enclosed Drainage Systems

Again ~~installation~~ is used in the list of activities, which could mean that ~~currently open drainage systems could be put into pipes and enclosed.~~ This is unacceptable. Also the first paragraph mentions that enclosed systems will be designed to current standards ~~without listing what those standards are.~~ The standards likely vary by jurisdiction and may not be adequate to sufficiently conserve listed species.

Maintenance Category #4- Open Drainage Systems

The RMP on page 1.57 notes that open drainage systems in this category are not watercourses, streams, or wetlands, which clarifies the intent. However, since there is no data in the RMP to determine where watercourses, streams, or wetlands are in comparison to open drainage systems, ~~it is not clear how applicants will know the difference.~~ This is a relevant concern because category #4 allows many activities that could adversely affect salmonid habitat without mitigation.

On page 1.61, one of the habitat goals for category #4 is to "protect downgrade habitat". ~~It is not clear what is meant by this goal,~~ where it applies, etc.

Maintenance Category #5- Watercourses and Streams

This category begins by using the definition of a "watercourse" and "river or stream" from the Washington Administrative Code for Hydraulic Permits administered by WDFW. If this is the definition to be used, then any jurisdiction seeking coverage of this RMP should be required to ~~modify their codes to use this same definition.~~ Furthermore, there should be a map that shows these areas based on this definition for each individual jurisdiction seeking coverage from this RMP.

Also on page 1.62, this category notes that maintenance activities within waters of the state will be reviewed prior to work by WDFW, which is appropriate. However, this section fails to

~~describe the process by which the Army Corps of Engineers (ACOE) will review projects that~~
may occur within waters of the United States.

Finally, on page 1.62, there is no guidance about the training/qualifications for "environmental support staff" who will review work under this category. Furthermore, there is no guidance, standards, etc. to determine how this support staff will determine if a facility meets the definition above. ~~A permit without specific standards and consistency across jurisdictions, it is doubtful that the RMP will sufficiently conserve the listed species.~~

On page 1.63, please ~~define/describe how you determine where safety is compromised.~~

On page 1.64, see previous comment regarding review by ACOE.

Also on this page, under fish exclusion, the RMP notes that applicants must follow standards "according to HPA permit conditions as negotiated with the Services". It is unacceptable to grant ESA coverage to parties based on a yet agreed upon standard, especially when the Tribe has not had an opportunity to review and comment on a pending standard.

On page 1.65, ~~disturbed areas should be seeded and replanted with native species. The RMP is not this specific.~~

On page 1.66, there is a goal to identify chronic sediment deposit problem sites without defining how these sites will be identified (i.e. is the standard someone's back yard or salmon redds) and ~~when human-caused impacts are identified.~~

Maintenance Category #6- Stream Crossings

Affected Tribes, not just WDFW, should also review any activity conducted under this category. Stream crossings can interfere with habitat forming processes and preclude or prolong properly functioning conditions. This category should be ~~rewritten to recognize this problem and to identify ways in which it will be avoided.~~

Also on page 1.67, in the last bullet, please ~~remove "to the second degree"~~ from this section since it could be interpreted to mean wood (i.e. LWD). ~~Since the bullet list is not in this, this should be sufficient to enable the intent of the bullet.~~

Page 1.68, see previous comment about the Tribe having the opportunity to review activities under this category, as well as, WDFW. ~~The scheduling of stream crossings should follow the #~~
~~conservation standards to protect salmonids.~~ The fish exclusion standards in the RMP should be the most conservative to protect salmonids. We have not had the opportunity to review the ACOE's programmatic Biological Assessment for fish passage restoration projects to determine if these standards (which NMFS has agreed to via a programmatic biological opinion <http://www.nwr.noaa.gov/publicat/2001/wsb01-197.pdf>) are more protective or not. Therefore, we reserve judgment on this issue until we have reviewed the programmatic documents. ~~Finally, there is no requirement habitat restoration will occur under this category (or any others in the RMP) and should be~~

On page 1.69, the RMP notes that it is a goal to protect habitat and watercourses or streams by performing maintenance; however, there is no data to suggest that this will or has occurred in the past. Perhaps the goal should be rewritten as follows:
~~Protect habitat and watercourses or streams while performing maintenance.~~

On page 1.70, culvert replacement work should be striving to ~~restore habitat processes in addition to providing fish passage~~. At this time, we are reserving judgment on the adequacy of Washington's Fish Passage Design at Road Culverts Manual to attain and maintain properly functioning conditions for fish passage, except to say that the Manual is probably not adequate to protect all salmonids at all life stages.

On page 1.71, the RMP indicates that ~~habitat restoration work might be done~~, meaning ~~habitat restoration is discretionary, which is unacceptable~~. NMFS should not approve the RMP unless there is a commitment to ~~complete habitat restoration as needed for impacts associated with roads and road maintenance~~.

Maintenance Category # 7- Gravel Shoulders

If the purpose of this activity is to have shoulders that filter sediments, etc, then shoulders should not be paved under Category #1.

Maintenance Category #9- Bridge Maintenance

~~It is not clear~~ how bridge activities limit the number of crossing through the habitat area. Some specific examples would be useful and a recognition that this statement is probably not accurate for watersheds that have several jurisdictions in them. Also, it is not apparent how this category will improve fish passage unless it is implying that bridges will be used in lieu of culverts.

On page 1.80, ~~there is no requirement that bridge activities adhere to a specific time frame for work within and near perennial waters and should be. The time frame should be the most conservative to protect salmonids~~. Also, the RMP should indicate specifically the areas/watersheds where it would not be appropriate to restore vegetation in riparian areas under this activity.

On page 1.82, in the bridge maintenance table, the fourth sentence under conservation objectives achieved by states "in addition, it reduces structural damage to watercourses and stream systems". ~~It is not clear what the word "it" is referring to and how the authors reached this conclusion~~. Also in the next statement indicates that shade will be provided, which is not possible unless shade-producing vegetation is restored in riparian areas affected by bridge maintenance. An optional process as indicated on page 1.80 will not meet this objective.

On page 1.84, there is a conflict in the operational section of Snow and Ice Control descriptions. Removing sand from an area (item 2) and plowing snow in areas that allow vegetation to filter (item 3) are not the same activities. Therefore, ~~it is not clear if sand will be removed from affected areas, or just plowed into others to allow for some filtering~~.

On page 1.85, ~~the conservation objectives on this page are inconsistent~~. One describes removing sand, while two others discuss improving traction through the use of sand.

Maintenance Category #11- Emergency Slide/Washout repair

This entire category needs to be rewritten; ~~it is too broad~~. As it reads now, ~~any slide would be considered an emergency~~ to all areas, not just those that threaten a roadway or capital improvement. It may be that a slide is generated by a roadway but doesn't affect any human-made areas. A slide may actually have some benefits by delivering gravel and wood to a watercourse that is lacking such features. However, this category will interfere with this outcome by allowing jurisdictions to armor with rock, remove debris (which could mean wood and gravel but is not defined here). ~~There is no requirement to stabilize slide areas with vegetation~~; therefore, all slides may become a zone of riprap, and not contributing towards proper functions

conditions. Any activity that is done to "prevent further damage" to the environment should be reviewed by the Tribe and resource agencies prior to its commencement.

Maintenance Category # 13 – Sewer Systems

It is not clear why this category is included in a road maintenance program. It should be submitted under a separate sewer ESA compliance submittal that would take into account the entire sewage system.

Maintenance Category #14- Water Systems

It is not clear why this category is included in a road maintenance program. It should be submitted under a separate water system ESA compliance submittal that would take into account the entire water system.

Maintenance Category #15- Vegetation

On page 1.103, the RMP mentions that vegetation management in zone 2 should comply with regulations and standards ~~without specifying what these regulations and standards are.~~

On page 1.104, the RMP notes that zone 3 is to "minimize maintenance efforts in the outer edges of undeveloped portions of the ROW". However, the RMP also notes that this is a temporary condition until the ROW is needed for its dedicated purpose. Therefore, even if zone 3 is an area with minimal maintenance, i.e. tree removal, pruning, herbicide application, etc., ~~this is not a permanent condition and should count towards meeting properly functioning conditions.~~

Also on page 1.1.04, the RMP should discuss in detail how tree pruning and removal provides environmental benefits.

On page 1.108, one of the BMP outcomes is to reduce blow down hazard. This may be important for road safety; however, there is no consideration that trees naturally blow down and sometimes this is the process by which trees end up watercourses to create instream habitat. Therefore, ~~tree removal under this vegetation category should be examined and modified to ensure that the fewest number of trees are removed under this RMP and for any that could provide habitat in a watercourse, then there should be mitigation for those removals.~~

~~Forest Management Practices~~

On page 2.5, it should be noted in the RMP that erosion processes could directly ~~adversely affect aquatic life, including fish, not just habitat.~~

On page 2.6, we agree that clearing existing vegetation will increase runoff velocities and volumes; therefore, ~~the vegetation management category should be modified because it encourages vegetation removal.~~

On page 2.6, the RMP should require that sediment traps and basin BMPs be installed before other land-disturbing activities; this should be discretionary. Also, ~~the frequency of inspection and maintenance is important to successful BMPs; however, the RMP offers no standard to ensure soil frequency.~~

On pages 2.12 and 2.13, please define "fine-grained materials".

On page 2.14, Reduce Water Velocity/Erosive Forces, under the limitations section, there is language that suggests that these BMPs not be used in locations could reduce actual or potential

high flow salmonid refuge functions. This is the first time that this issue is raised. ~~It is noted that this should also be discussed in Part I of the RMP along with what it means and what should be done to correct it.~~

On page 2.16, Habitat Protection/Maintenance, ~~modify the term "large woody debris" to read "wood"~~ because all sizes of wood should be available for habitat protection and not of it should be considered debris. Debris is human created trash, not natural features found in watercourses. Also, the BMP options ~~should identify appropriate sizes to be considered streambed gravel.~~

On page 2.21, there is a requirement that water discharged from a water barrier shall meet water quality temperature standards without specifying the standard. NMFS has recently established a water temperature standard for chinook that is necessary for water discharges in the White River (December 28, 2001 Biological Opinion for the 324 Acre Land Transfer and Proposed Land Uses Along the White River, Washington project (WSB-99-156; Corps #1997-4-01098 ATF). ~~This temperature standard should be applied to all appropriate areas seeking coverage that contain chinook.~~

On page 2.23, there is a BMP for back of slope planting which will limit trees to 4 inches or smaller. There should be data to describe how often this BMP will be applied (i.e. the number and location of slope plantings) and the likelihood that this approach will provide any shade to watercourses. This data is necessary to determine the impacts associated with this BMP. Also, on this page, it is not clear how one will determine if the BMP will cause water flow problems; there is no guidance.

On page 2.24, the ~~minimum standard for replanting is too vague~~ and should be more specific.

On page 2.25, there should be ~~timing restrictions~~ put on cofferdams so that they protect salmonids for all life stages to the fullest extent possible (i.e. the most restrictive fish window).

On page 2.33, the RMP should be modified to ~~require dewatering of construction areas where concrete containment will be done.~~

On page 2.36, add a bullet that describes ~~how to properly dispose of concrete~~ that is removed from a sump.

On page 2.39, clarify that construction access roads ~~should be temporary and require appropriate BMP's for their closure once construction is completed.~~ Also on this page, the RMP should require this BMP for erosion hazard sites, not just unstable soils. Finally, the RMP is missing any requirements for the access road to provide adequate drainage; there should be cross-drains, etc. to direct road run to vegetated areas to minimize the creation of unmanaged drainage networks.

On page 2.40, the washrack BMP is important and should not be an optional feature.

On page 2.41, the continuous berm should not be allowed in intermittent streams and wetlands connected to surface waters.

On page 2.53, under construction guidelines for ditch lining, the application section should be re-written to make sure that this BMP is only used on areas that ~~do not meet the definition of watercourses and streams under WAC 220-110-020 (41).~~ Also ~~"turbulent water" is not defined and is there a limit on the amount/size of angular rock that can be used?~~

On page 2.64, the requirement to have filter fabric be used in accordance with permit requirements is too vague of a standard. Please ~~provide a measurable standard here.~~

On page 2.67, add a standard that requires mitigation for any wood that falls into the channel and is a risk for public safety or structure damage.

On page 2.86, modify this entire page by using the term "wood" instead of "large woody debris", especially since ~~large woody debris is not defined in the RMP~~. Also, the application section indicates that there will be "desired engineering performance and desired habitat benefits" ~~without defining either term~~. Without specificity, each jurisdiction will be defining these with limited coordination or consistency. ~~See the Figure on page 2.87 which is showing a piece of wood that is mostly out of the wetted area, thus limited in its functional value for habitat. Also,~~ please clarify the purpose of the second bullet under the limitations section

Finally, for any jurisdiction to get credit for restoration under this limit of the 4(d) rule, NMFS should require that ~~wood placement projects meet NMFS definition of wood under the National~~ ~~Highways and Indicators~~. NMFS recently established this standard in its December 28, 2001 Biological Opinion for the 324 Acre Land Transfer and Proposed Land Uses Along the White River, Washington project (WSB-99-156; Corps #1997-4-01098 ATF).

On page 2.92, the live staking BMP suggests that water may need to occur during the summer months ~~without specifying where this water should come from~~. The water should not come from watercourses that lack adequate flow, nor any area during drought conditions.

On page 2.97, plastic covering should be used in any erosion hazard areas, not just steep slopes.

On page 2.101, ~~rip rap should not be used in areas where salmonids spawn~~ or is a source of gravels/cobbles that can provide spawning habitat. These areas should use bioengineering techniques that will not interfere with habitat forming processes.

On page 2.103, ~~rock check dams should not be used in watercourses when they may interfere with up and downstream migration in all flow conditions.~~

On page 2.117, please define the term "sufficient timing" that is supposed to occur prior to discharge. Also, the RMP should require that ~~retention ponds be designed to the most protective~~ surface water design standard, not any standard as written.

On page 2.128, ~~stream bank barriers should be restricted to non-fish bearing waters~~; eliminate the third bullet under limitations.

On page 2.133, ~~stream bank barriers should be restricted to non-fish bearing waters~~; eliminate the third bullet under limitations.

On page 2.139, the stream bank stabilization BMP ~~encourages the use of any stream bank guidelines instead of requiring the most protective guidelines to be used.~~

On page 2.140, the stream bypass BMP, the RMP is ~~missing a requirement to ensure that stream bypasses do not entrain salmonids in pipes and pumps that may be used.~~

On page 2.144, ~~add the following sentence~~ gravel BMP to be consistent with Part 2. Also, please ~~define the sizes for detached gravel~~ and add them here in addition to comments made previously.

On page 2.150, ~~add the word "properly"~~ at the end of the last bullet under construction.

On page 2.153, it is unclear as to what BMP is used to trap sediment if the total contributing drainage area is more than 3 acres.

On page 2.160, please ~~define the term "significant body of water"~~ under the limitations section.

On page 2.166, please ~~define what a "potential public safety hazard"~~ is under limitations. ~~Remove this second bullet~~; it is too broad and very subjective.

Appendix E: Fish Exclusion Protocol

The fish exclusion protocol needs substantial changes prior to its approval by NMFS. First, anyone using the protocol ~~should be required to obtain a Section 10(a)(1)(A) Permit~~. This requirement would enable NMFS (and others) to keep track of the level of take that may occur via fish exclusion activities. Without it, there is no way to keep track of take. Also, there needs to be a standard for fish exclusion efficiency and the success of fish exclusion should be tested. In some cases, gravel should be sampled for eggs, alevins, and fry.

On page E.2 of the Exclusion protocol, it is not clear how waters that "do not contain ESA-listed fish" will be determined.

The training program ~~should be modified to require periodic checks~~ by fish biologists that can properly identify salmonids, require photos of random fish being sampled to verify identification, and evaluate trainees with non-listed coho before they use this method with chinook.

On page E.3, the protocols to classify fish by age class are incorrect. The size of 0+ fish will depend on the time of year and fish species. For example, in the Lake Washington basin, 0+ coho, chinook, and sockeye can reach 100mm in length by June (Eric Warner, pers. comm., 2002). ~~It is better to estimate the mean length of the average fish of each size class. This can be done using MS on all caught fish~~, provided they are not stressed too much from capture. The data listed for field notes ~~should be a minimal requirement and not be optional as it is currently written~~. Injuries and mortalities should be reported for all fish caught, not just listed fish.

On page E.4, the protocol should require ~~regular checking of nets~~, not just waiting until leaves and debris are collected. By then, the fry will be dead. The nets should be ~~checked more frequently if rain or leaf fall is a possibility to avoid fry mortality~~.

Also on this page, the Protocol proposes to use a modified method based in part on a protocol used by the Tribe. The Tribe does not have a set protocol for seining; rather the Tribal Fisheries Department used a particular method for research in the Duwamish River (i.e. Warner and Fritz, 1995). This method may not be appropriate for all areas and should not be cited as the basis for the fish exclusion protocol method. The two methods have little in common (Warner, pers. comm. 2002).

On page E.5, the protocol electrofishing guidelines are not adequate and it is not apparent how they were derived. Also, there are no maps to determine what is an anadromous water and what is a resident water. Chinook fry will be rearing until at least mid-May in some watersheds. Coho will be in several areas all year. Sockeye fry will migrate into April as fry. Chum will migrate as

fry as late as May/June. Steelhead may not spawn until after March 1; the earlier spawners will have eggs in the gravel. (Warner, pers. comm. 2002).

On page E.6, while it is important to release ESA specimens as soon as possible, it is also important to determine if the exclusion protocol is causing mortality; ~~therefore, fisheries biologists should conduct mortality assessments for projects seeking coverage under this federal permit.~~

Also on this page, the ~~conductivity settings on shockers should be revised every 10 minutes~~ in areas where conductivity can be increased by kicking up mud, etc.

On page E.7, it is important to test the success of fish exclusion techniques for areas that will be dewatered. One way to do this is to set the electroshocker to "dry" and see if anything was missed. Gravel should also be sampled for eggs, alevins, and fry.

Also on this page, ~~these needs to be standards on the screen size used for pumps and the bucket slots. The screen standards should follow Washington Department of Fish and Wildlife's~~ guidelines for velocity and mesh size. The pump hose outlet should be checked periodically for signs of fish and invertebrates.

Biological Review of the Regional Road Maintenance ESA Program Guidelines

General Comments

In general, this review and citation of the original source document for many of its citations. Rather, the authors relied on compilation documents, which may or may not cite the original source documents correctly. Furthermore, some documents used are out of date and do not reflect the best available science.

The objectives of the Biological Review (BR) to provide a basis for NMFS' biological evaluation of the RMP, as well as, ~~to conclude that the RMP appropriately conserves threatened and endangered species by contributing to PFC and sustainable.~~ However, in the course of its assessment, the Biological Review is limited and inadequate to achieve either objective. For example, the BR relies on global information regarding the status of the species based on previous listing decisions. Additional information is available for specific populations that will be affected by this program particularly on the individual jurisdiction scale (i.e. watersheds). This information was not considered in the BR making it a clumsy tool to use for either objective. Similarly the life history data in Section 3.2 is so broad and its run timing tables are without citations that it makes any analysis difficult at best. A final example is the single paragraph for the "Factors of Decline" for Puget Sound Chinook on page 39 that ~~is without substance and citations.~~ This BR should have a lengthy discussion about the contribution of roads and road maintenance activities to the factors of decline, which likely vary in scale, frequency, etc. by watershed.

Another concern is the BR lacks any discussion about having some jurisdictions follow the RMP and others doing something else. Based on Part 3, it appears that several jurisdictions are not applying for Limit 10 at this time; therefore, all of the WRIAs in the ~~Tribe's life A are lacking complete coverage under the RMP at this time. This should remedy the situation.~~

Specific Comments

On page 10, in the Background section towards the bottom of the page, the BR notes that Puget Sound area tribes "provided input and assistance in the development of the Guidelines". This statement is inappropriate because it fails to note specifically which tribes participated, how they participated, and how their comments were used in the final version of the document. The

~~Muckleshoot Indian Tribe may have participated early on in the process; however, we did not participate in the drafting of the final RMP nor the BR.~~ Please note this in the updated version of both documents.

Also on page 10, the BR noted that Limit 10 provides "routine road maintenance activities" which begs the question as to ~~why sewer and water systems are not included in the BR.~~

On page 12, at the bottom of the page, the BR notes that the program does not apply to construction of new facilities or major expansion of existing facilities ~~which appears to contradict portions of Part 1 of the RMP which identifies "installation" of facilities as one of the activities.~~ If installation does not apply to either new construction or major expansion, then it should be defined as such in the RMP. Otherwise, the BR is incorrect on this page and should provide an analysis of these potential new impacts. See also page 15, under Section 2.2 for similar inconsistencies.

Section 2.2.3 Maintenance Categories

Most of the categories in this section (pages 20-27) have the potential to cause site specific and cumulative adverse impacts, ~~yet none of the categories are proposing any mitigation. This is a problem with the RMP itself. The BR fails to recognize this issue, therefore merely restates facts of such a proposal.~~

On page 23, the BR notes six "habitat goals" for stream crossings. There are two problems with these goals. First, there is no goal of ensuring that the stream crossing does not interfere with habitat forming processes (i.e. movement of wood, water, and sediment). Secondly,

Also on page 23, the BR notes that habitat restoration work may be part of road maintenance or not. ~~It is not clear here (or in the RMP) if these activities are covered under this Limit 10 submittal or not.~~

On pages 25 and 26, ~~please eliminate sewer and water systems from the BR~~ (and the RMP); they are not appropriate for the Limit 10 of the July 2000 version of the 4(d) rule.

On page 34, the BR notes that stream-type and ocean-type juveniles can be produced by any of the chinook races. The basis for this statement is a phone call to a WDFW Biologist (John Sneva). ~~If this statement is accurate, it should be based on data and/or a WDFW report.~~

~~There is a mistake on page 26.~~ The authors cite the SASSI document as WDFW 1994 when it should be WDF et al. 1993.

Pages 37-39 are all ~~missing the course the Tables 2a, 2b, and 2c.~~

On page 39, the BR ~~should cite the federal register where NMFS designated critical habitat.~~ Also in this paragraph the rule exempts "Indian lands" not "tribal lands" as noted in the BR. Indian lands are defined in the rule, not tribal lands.

Section 3.2.5 Bull Trout

If the RMP isn't seeking coverage for bull trout (see page 9 of the BR), then it is unclear why there is any discussion about bull trout. Furthermore, for the information this is provided in this section, it is lacking citations for a majority of its statements. Finally, Table 16 does not identify all segments of listed bull trout (see <http://www.r1.fws.gov/news/bulltrout/btsp99.jpg>). ~~The information in Table 16 is not cited.~~

Section 4.0 Baseline Habitat data

The first paragraph implies that all treaty tribes worked with the Washington State Conservation Commission to develop limiting factors reports. This is not entirely accurate for the Muckleshoot Indian Tribe. We provided some information and assistance to the Conservation Commission for some of the WRIs in the Tribe's U&A; however, our involvement was limited and we are not responsible for the information in those reports. Nor are we responsible for information in any limiting factors reports that were completed by the Conservation Commission and individual WRIA groups (i.e. WRIs 8 and 9).

On page 79, the BR purports that the RMP supports habitat protection and restoration strategies by "developing BMPs that avoid and minimize impacts to aquatic habitats due to routine road maintenance activities". ~~The BR fails to provide any data or analysis to support this statement.~~ There is no discussion about the specific limiting factors attributable to roads and road maintenance activities and how the RMP will be addressing those. ~~Without a detailed analysis by watershed, this statement is nothing more than an objective of the program.~~

Section 5.2 Context of this Biological Review

On page 82, the RP notes, "the contribution of historic and present road maintenance practices is minimal relative to the many other land-use practices that have shaped the present environmental baseline". ~~This statement is unsupported by data or analysis in the BR.~~ Again, without a detailed discussion of specific to roads and road maintenance, this statement cannot be made. Furthermore, if historic and present road maintenance practices are minimal relative to other land use practices, ~~then the BR should provide the analysis to support this contention.~~ It may or may not be true in specific watersheds and to specific life history stages of specific salmonid populations.

Finally, ~~the BR fails to note that the existence and use of roads can cause adverse impacts to lacustrine habitat forming processes~~ that involve the recruitment and transport of wood. Roads also have a cumulative effect by fragmenting habitat (May et al. 1997). Roads also contribute to degraded water quality and adverse impacts to aquatic life by providing a direct source of pollutants (Spence et al. 1996, May et al. 1997 etc.).

Section 5.3.1 Road Maintenance Practices

Again, there is no data or analysis to support the statements in the first paragraph on page 84. ~~The second paragraph fails to note that several BMPs are not 100% effective to reduce sediment and/or pollutant inputs.~~

On page 85 (and elsewhere), the BR cites a document, CRITFC-1994, but failed to include it in Section 8.0: Literature Cited. Furthermore, the BR attributes several statements regarding information from Puget Sound to this document, which is unlikely since CRITFC operated in the Columbia River basin, not Puget Sound. It appears that the authors meant to use May et al. (1997) for the citations on Puget Sound.

Section 5.3.3. Fish Barriers

Again, the second paragraph that provides barrier information is accredited to the CRITFC 1994 document, which is incorrect. The citations should be from the annual joint WDFW and WSDOT reports to the Legislature and include the most recent report.

Section 5.3.4 Water Quality

The information regarding waterbodies not meeting Washington water quality standards should be attributable to the Department of Ecology, not CRITFC 1994. Furthermore, ~~there should be an analysis~~ of these waterbodies compared against roads that will be covered under the RMP to determine which roads and which BMPs may affect current water quality conditions.

Section 5.3.5 Habitat

It seems unlikely that CRITFC 1994 is the basis for the statement regarding the loss of pools in National Forests or the state of habitat on federal lands on page 87. Also, please substitute the term "LWD" with the word "wood".

Page 88 is ~~missing citations~~ to support any of the data this quoted on this page.

Section 5.3.6 Harvest

This section should be removed; it is not relevant to the RMP for Limit 10. Furthermore, it is clearly not written by someone who knows harvest data and current harvest rates.

Section 5.3.7 Hatcheries

Again, remove this section; it is not relevant to the RMP proposed for Limit 10 of the 4(d) rule.

Section 5.3.9 Regulatory Framework

The first paragraph in this section states "the existing regulatory framework and implementing agencies may be unable to protect salmon populations and their ecosystems". The word "~~un~~" ~~should be replaced with "not"~~. NMFS concluded this in the final 4(d) rule (Federal Register / Vol. 65, No. 132 / Monday, July 10, 2000 / Rules and Regulation).

Section 6.0 Analysis of Effects

There is ~~no data or analysis to support the statement that "road maintenance is a form of mitigation for the original construction of the roadway"~~. Road maintenance activities often cause adverse impacts themselves and sometimes occur without mitigation. ~~There is nothing in the RMP or the BR to suggest that the Regional Program can contribute significantly to PPC for aquatic species.~~

On page 92 at the bottom, the BR describes how enclosed drainage systems contribute to conservation; ~~however, this booklet~~ (as well as the section on enclosed drainage systems in the RMP) ~~fail to note that by controlling volumes and velocities there is a corresponding increase in flow duration that may cause adverse impacts to aquatic life.~~ Please see the 1998 King County Surface Water Design Manual.

Section 6.2.3 Blockage Removal

On page 94, the BR identifies "~~debris~~" that should be removed to restore passage. Please delete this term and replace it with the word "~~debris~~". If the intent was to be able to remove wood (being called debris here), then there will be a problem because removing wood in lieu of relocating it will cause adverse impacts without mitigation.

Also on this page, the BR mentions a 1999 MOA between the Services and WDFW. Our review of this MOA indicates ~~that it is an interim document; therefore, it is not appropriate to use it as the basis of providing standards for blockage removal.~~ Furthermore, this MOA has never been discussed with the Muckleshoot Indian Tribe to determine if the MOA will be sufficient for treaty-protected resources or not.

Section 6.2.4 Restoration of Flow Velocities/Volumes

Muckleshoot Indian Tribe Fisheries Department

Comments to the Proposed Regional Routine Road Maintenance Program Submittal Under Section 4(d) of the ESA

April 12, 2002

Any BMP that restores flow velocities/volumes should be done with goal of ~~meeting the needs of aquatic life; not just aquatic habitat~~. There has long been the assumption that protecting stream channels from erosion is sufficient to protect aquatic life, which is not correct (see May et al, 1997). Furthermore, the RMP does not identify specific standards to meet this objective; therefore, it is doubtful that it will be achieved.

Section 6.2.5 Removal of Fish Passage Barriers

~~There is nothing in the RMP that provides a commitment to remove fish passage barriers.~~ Furthermore, there is no real analysis about the extent of the problem and the timeframe when these barriers will be removed. Without this information, one cannot complete an analysis of this BMP to provide conservation for the species.

Section 6.2.6 Revegetation

There is ~~no data or analysis to support~~ the contention that the revegetation BMPs will increase shading and reduce water temperatures.

Section 6.2.9 Addressing Chronic Maintenance Problems

The commitment to refer chronic maintenance problems to capital improvement programs does ~~nothing to provide any assurance that these problems will be fixed in a timely manner.~~

Section 6.3.3 Effects Analysis

While the BR may assume that salmonids are present in any watercourse covered by the RMP, the RMP does not make the same assumption. ~~Therefore, there is no basis for this assumption in the BR.~~

On page 100, it is unclear how an HPA will change a situation from a "likely to degrade baseline indicator" to ~~not likely to adversely affect~~. Furthermore, there is no data to support this ~~concept.~~

On page 101, the BR fails to note that ~~ditch cleaning~~ of potential salmonid bearing waters done as road maintenance will not have short term impacts. Furthermore, impacts within one season (which could be viewed as short term) may affect an entire year class of salmonids within the affected waterbody. Hardly a minimal impact to the listed species

~~There is no data to support the conclusion shown in Figure 2 of the BR as to impossible to analyze whether the predicted outcome of the RMP will occur.~~

Section 6.5 Adverse Effects

This entire section is just a ~~reiteration of previous sections~~ and ~~does not provide any analysis of adverse effects and how the BMPs will mitigate for these effects with data to support conclusions.~~

Section 6.6 Beneficial Effects

This section attempts to identify the benefits of various BMPs; ~~however, there is no commitment to do the activities in this section and there is no data or analysis to support the conclusions.~~

Section 7.0 Conclusion on Conservation

~~Based on all of the previous comments, it is impossible to conclude that the RMP will conserve the listed species.~~

Additional notes

In 1998, the Washington Department of Transportation completed a SEPA checklist for a project to use Polyacrylamides (PAM) For Soil Erosion Control and Flocculation of Stormwater. According to WAC 173-270-030(6)(d), Puget Sound Highway Runoff Program, required WSDOT to share the results of the experimental BMPs with affected tribes, local governments, or property owners prior to Ecology's authorization expires. We have not seen the results of this experimental BMP and it would be interesting to know if it was effective or not. WSDOT intended to evaluate this BMP for at least one year and possible up to four. Furthermore, there should be some data and reports available that determine the effectiveness of road BMPs in conjunction with NPDES permits. This data should be analyzed in a revised BR.

Citations

Booth, D. B. 1991, Urbanization and the Natural Drainage System--Impacts, Solutions, and Prognoses: Northwest Environmental Journal, v. 7, p. 93-118.

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Spence, B.C., G.A. Lomnický, R.M. Hughes, and R.P. Novitzki. 1996. An Ecosystem Approach to Salmonid Conservation. TR-4501-96-6057. Man-Tech Environmental Research Services Corp., Corvallis, Or. (Available from the National Marine Fisheries Service, Portland, OR.)

Warner, Eric. April 2002, Personal Communication to Karen Walter. Muckleshoot Indian Tribe Fisheries Department.

Appendix E: Attorney General Letter regarding Emergencies



Christine O. Gregoire

ATTORNEY GENERAL OF WASHINGTON

Transportation & Public Construction Division
PO Box 40113 • Olympia WA 98504-0113 • (360) 753-6126

RECEIVED

APR 23 2002

MAINTENANCE

MEMORANDUM

April 19, 2002

TO: Terry Simmons
FROM: Bill Attridge *B. A.*
SUBJECT: **Emergency Protection and Restoration
Highways**

Unanticipated events occur that pose an immediate threat to the integrity of the highway system and the safety of the traveling public. To promptly respond, the Department is authorized by the Legislature to utilize an expedited course of action. For example, RCW 47.28.170 states in part:

(1) Whenever the department finds that as a consequence of accident, natural disaster, or other emergency, an existing state highway is in jeopardy or is rendered impassible in one or both directions and the department further finds that prompt reconstruction, repair, or other work is needed to preserve or restore the highway for public travel, the department may obtain at least three written bids for the work without publishing a call for bids, and the secretary of transportation may award a contract forthwith to the lowest responsible bidder.

(2) Whenever the department finds it necessary to protect a highway facility from imminent danger or to perform emergency work to reopen a highway facility, the department may contract for such work on a negotiated basis not to exceed force account rates for a period not to exceed thirty working days.

Also, when delay of the work would jeopardize a state highway or constitute a danger to the traveling public, the work may be done by state forces when the estimated cost of the work is less than \$80,000. The dollar amount has been recently increased by the Legislature to provide a more effective method to promptly react to these emergency situations. RCW 47.28.030.

An Emergency Procedures Manual has been developed by the Department. Its purpose is to establish emergency operating procedures so that Department personnel can expeditiously respond to those conditions set forth in the above referenced statutes. The first step in the procedure is to issue a Declaration of Emergency. The decision to make the Declaration lies with the Secretary of Transportation or his designees which includes the Regional Administrators. The Administrators may further delegate the authority to their respective Maintenance Superintendents. In an upcoming revision of the Manual, the authority for the delegation will extend to the Project Engineer in charge of the emergency work.

Once the Declaration is issued, the necessary effort to reconstruct, repair, or do other required work can be expedited to preserve or restore the highway facility for public use. By

ATTORNEY GENERAL OF WASHINGTON

Terry Simmons
April 19, 2002
Page 2

authorizing the Declaration, the Department may use the acceleration method to select contractors to do the emergency work pursuant to RCW 47.28.170 or use state forces pursuant to RCW 47.28.030. In addition, the Declaration places the work in an emergency mode so that the various environmental laws relating to such work apply. Thus, the Declaration immediately allows the applicable Regional Environmental Office to secure any permits or provide any notifications that may be applicable to emergency work. The environmental staff can rely upon the Declaration to ensure itself that the proposed work falls within the various definitions of the term "emergency" as found in the federal and state environmental laws. All of these definitions relate to situations where unanticipated events have occurred requiring response activities that must be taken to prevent the loss of property or injury to the public. That criteria is the same as found in RCW 47.28.170. The statute governs situations where highway work is required to protect the facility and the traveling public from the consequences of an accident, disaster or other emergency. The Declaration is issued only when the emergency conditions exist as described in RCW 47.28.170. It likewise satisfies the concept of an "emergency" as that term is used in various environmental laws that may be applicable to the proposed work.

For example, the Shoreline Management Act exempts development from the requirement for a shoreline permit where it is "emergency construction necessary to protect property from damage by the elements." RCW 90.50.030(3)(e)(iii). The shoreline regulations further define "emergency" as "an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter." WAC 173-27-040(2)(d). The Hydraulic Code allows oral authorization for work in an emergency, which it defines as "an immediate threat to life, the public, property, or of environmental degradation." RCW 77.55.100(5).

Federal environmental regulations contain similar provisions. The Corps of Engineers' section 404 regulations define an emergency as follows:

An "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.

33 CFR section 325.2 All of these environmental statutes and regulations define "emergency" in a manner that is entirely consistent with the use of the term in RCW 47.28.170. Therefore, a declaration of emergency by the region under RCW 47.28.170 is sufficient to invoke the emergency provisions under the environmental statutes. It makes no sense to find that an emergency prevents the use of the normal competitive bidding process, but that a months-long environmental application process should still apply.

The Declaration puts in place an expedited procedure to protect the highway from damage and to restore it as quickly as possible for public use. Once the Declaration has been issued by an authorized person, Department personnel may consider the proposed work as emergency in nature for purpose of selecting a contractor, using state forces, and complying with environmental laws and regulations.

JWA:jah